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**UNITED STATES DISTRICT COURT
DISTRICT OF NEW JERSEY**

YANG RENBIN, ROBERT ANGELINE,
COREY HAYS, AND ALEXANDRE
TAZI, Individually and On Behalf of All
Others Similarly Situated,

Plaintiffs,

v.

GSX TECHEDU INC., LARRY
XIANGDONG CHEN, NAN SHEN, XIN
FAN, YIMING HU, MING LIAO, CREDIT
SUISSE SECURITIES (USA) LLC,
DEUTSCHE BANK SECURITIES, INC.,
BARCLAYS CAPITAL, INC., BOFA
SECURITIES, INC., CLSA LIMITED,
AND GOLDMAN SACHS (ASIA) L.L.C.,

Defendants.

Case No. 2:20-CV-04457-ES-CLW

**SECOND AMENDED CLASS ACTION
COMPLAINT FOR VIOLATIONS OF
THE FEDERAL SECURITIES LAWS**

JURY TRIAL DEMANDED

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Court-appointed Lead Plaintiff Yang Renbin (“Lead Plaintiff”) and Additional Plaintiffs Robert Angeline, Corey Hays and Alexandre Tazi (collectively, “Plaintiffs”), by and through undersigned counsel, bring this federal securities class action individually and on behalf of all other persons and entities (the “Class”¹) that purchased or otherwise acquired the publicly-traded American Depositary Shares (“ADSs”), evidenced by American Depositary Receipts (“ADRs”), of GSX Techedu, Inc. (now renamed Gaotu Techedu Inc.) (“GSX,” “GSX Techedu” or the “Company”) from June 6, 2019 through October 20, 2020 inclusive (the “Class Period”), including those who purchased ADSs in or traceable to the Company’s initial public offering on or about June 6, 2019 (the “IPO”), or GSX’s secondary public offering on or about November 20, 2019 (the “SPO”), and were damaged thereby.

Plaintiffs’ claims are asserted under the Securities Exchange Act of 1934 (the “Exchange Act”). As alleged in this Complaint, Defendants (defined in Section III(B), *infra*) issued materially false and misleading registration statements and prospectuses for the June 2019 IPO and November 2019 SPO and, throughout the Class Period, also made a series of statements that the Defendants knew, or recklessly disregarded the risk that such statements, were materially false or misleading at the time the statements were made, and omitted material information necessary to make the statements, in light of those material omissions, not materially false or misleading.

¹ The following are excluded from the Class: (1) Defendants; (2) members of the immediate family of any Defendant who is a natural person; (3) any person who was an officer or director of the Company during the Class Period; (4) any firm, trust, corporation, or other entity in which any Defendant has or had a controlling interest; (5) the Company’s employee retirement and benefit plan(s), if any, and their participants or beneficiaries; and (6) the legal representatives, affiliates, subsidiaries, parents, heirs, heirs apparent, successors-in-interest, or assigns of any such excluded person or entity.

Plaintiffs' claims are brought upon personal knowledge as to their own acts, and upon information and belief as to all other matters, based upon, among other things, a review and analysis of (1) reports and documents filed by GSX with the U.S. Securities & Exchange Commission ("SEC"); (2) reports issued by analysts covering or concerning GSX and its business; (3) press releases, news articles, transcripts, and other public statements issued by or about GSX, its business, and the Defendants; (4) an investigation conducted by Plaintiffs' attorneys, including interviews with numerous confidential witnesses ("CWs"), including former GSX employees (as detailed further in Section VIII, *infra*); (6) consultations with experts; and (7) other publicly available information concerning GSX, its business, and the allegations contained herein. Plaintiffs believe that substantial additional evidentiary support exists for the allegations herein and will continue to be revealed after Plaintiffs have a reasonable opportunity for discovery.

I. INTRODUCTION

1. This is a federal securities class action against GSX, its two senior-most executives, and the underwriters who facilitated GSX's entry and continued access to the public market in the United States, seeking damages and other legal and equitable remedies to redress harms caused by Defendants' violations of Sections 10(b) and 20(a) of the Exchange Act, 15 U.S.C. §§ 78j(b) & 78t(a), and of SEC Rule 10b-5, 17 C.F.R. § 240.10b-5.

2. GSX is a Chinese company that offers online education classes to students in grades K-12 in China. GSX routinely represents that its "core expertise" is in providing K-12 educational and after-school tutoring courses in China through an "online live large-class format."

3. GSX is a fraudulent company. Astoundingly, the vast majority of GSX's student enrollment and revenues are simply fake. GSX falsifies at least 70% of its student enrollment

and revenues through (among other means) the sophisticated use of “bots.” A “bot” is a software application that runs automated tasks, such as making a dinner reservation, adding an appointment to a calendar or fetching and displaying information. More advanced bots, such as chatbots, can simulate human conversation. GSX uses bots to enroll fake identities and social media accounts into its classes, to login to those classes, and even to ask questions and participate in the classes. GSX also uses its teachers and tutors to create false accounts to inflate its student enrollment. On an unprecedented scale, GSX tried to fake it until it made it.

4. The evidence that GSX is mostly a fake company is overwhelming and undeniable. *First*, expert analyses of GSX’s login data reveals patterns and anomalies that cannot arise through ordinary human login behavior—anomalies that, in the opinion of experts, can only plausibly be explained as bots pretending to be human students. Plaintiffs consulted an expert in computer science and in detection of bots who analyzed data and conclusions published by third-party researchers. The expert independently concluded that, based on anomalies described in the data, at least 70% of GSX’s users are non-human bots. *Second*, numerous confidential witnesses independently confirm in detail that GSX Techedu’s student enrollment figures are grossly inflated by its use of bots to fake student users. *Third*, multiple public job postings by GSX recruited employees who had the skills necessary to “jailbreak” phones—skills that would be necessary to run massive cellphone-based bot operations, and that would be wholly unnecessary for a legitimate online education company. *Fourth*, GSX Techedu’s too-good-to-be-true growth, which according to GSX’s figures vastly outpaces that of its competitors, would place GSX alone with Google as the fastest growing companies in the past 30 years—a ridiculous conclusion given that its growth cannot be explained by any competitive advantage or other legitimate reason. *Fifth*, objective data show that GSX’s education services

are not used or recognized consistent with the Company's spectacular representations about its user base and revenues—virtually no one has heard of GSX Techedu in China. *Finally*, evidence makes clear that GSX hides its expenditures on falsifying users through bots as advertising and capital expenditures.

5. As GSX is mostly a fake company, much if not most of what GSX told investors constituted actionable misrepresentations under securities law. Centrally, GSX repeatedly overstated the size of the growth in its student enrollment figures and its revenues and profits.

6. Upper management either knew that their Company was mostly fake, or were so astoundingly reckless in not knowing that their recklessness amounts to scienter. Indeed, among the strongest evidence of, at a minimum, the severe recklessness of the Company and of the Individual Defendants comes from their own statements. The Individual Defendants and other representatives of the Company specifically and repeatedly denied that they were engaged in inflating or “brushing” student enrollment figures and other specific conduct detailed in this Complaint. These specific, blanket denials of the particular fraudulent practices at issue, often in direct response to questions from investors, constitutes powerful evidence, at a minimum, of recklessness.

7. Equally as compelling, Defendant Shen's job responsibilities included knowing and understanding each line item the Company's budget and knowing the items on which the Company actually spent its budget. As much of GSX's “marketing” expenses were spent on brushing to fake student enrollment and simulate student logins, Shen clearly knew about the Company's brushing activity. Likewise, Shen's job responsibilities included knowing how student enrollment figures were calculated. As the majority of enrollments were calculated based on falsified student enrollments, Shen clearly knew that the Company was inflating its

student enrollment figures. That 70% or more of the Company's core operations were simply fake further supports a strong inference of scienter, as do numerous additional supporting allegations.

8. Based on its known or reckless misrepresentations about its student enrollment, revenue and profit figures, GSX exploded in market capitalization from around \$6 billion to over \$30 billion in only 2.5 months, an explosion totally out of line with its competitors and inexplicable by reference to any known competitive advantage. As the truth about GSX's fraud emerged over a series of disclosures, including disclosure of independent research revealing the fraud, the disclosure of an SEC investigation, and most recently reports recognizing that the Companies' student enrollment and revenue figures are wildly off, GSX's share price has fallen dramatically. GSX's fraudulent, brazen gambit has cost Plaintiffs and other investors massive damages.

II. JURISDICTION AND VENUE

9. The claims asserted herein arise under Sections 10(b) and 20(a) of the Exchange Act, 15 U.S.C. §§ 78j(b) & 78t(a) and pursuant to the rules and regulations duly promulgated thereunder, including SEC Rule 10b-5, 17 C.F.R. § 240.10b-5.

10. This Court has exclusive subject-matter jurisdiction of all claims asserted herein pursuant to Section 27 of the Exchange Act, *id.* § 78aa, and original subject-matter jurisdiction of all claims asserted herein pursuant to 28 U.S.C. § 1331.

11. Venue is proper in the District of New Jersey pursuant to Section 27 of the Exchange Act, *id.* § 78aa, because Defendants transact business in this District. Venue is also proper in this District pursuant to 28 U.S.C. §§ 1391(b)–(d) because many of the acts and transactions that constitute the violations of law complained of in this Amended Complaint,

including the dissemination to the public of materially false or misleading statements, occurred in this District.

12. In connection with the acts, omissions, conduct, and other wrongs alleged herein, Defendants, directly or indirectly, used the means and instrumentalities of interstate and foreign commerce, including, but not limited to, the U.S. mails, the facilities of the national securities markets, through international and interstate data and wire transfers, and international and interstate telephonic and digital communications.

III. PARTIES

A. Plaintiffs

1. Lead Plaintiff Yang Renbin

13. As set forth in their Private Securities Litigation Reform Act (“PSLRA”) certifications, Lead Plaintiff Yang Renbin purchased or otherwise acquired GSX securities on the New York Stock Exchange (“NYSE”) during the Class Period and was thereby damaged.

2. Additional Plaintiff Robert Angeline

14. Additional Plaintiff Robert Angeline purchased or otherwise acquired GSX securities on the NYSE during the Class Period and was thereby damaged, as stated in Mr. Angeline’s certification and Exhibit A to Notice of Motion of Robert Angeline to Appoint Lead Plaintiff and Approve Lead Plaintiff’s Selection of Counsel, ECF No. 6-5 (June 16, 2020).

3. Additional Plaintiff Corey Hays

15. Additional Plaintiff Corey Hays purchased or otherwise acquired GSX securities on the NYSE during the Class Period and was thereby damaged, as stated in Mr. Hays’s certification and Schedule A, filed with this Amended Complaint as Exhibit A.

4. Additional Plaintiff Alexandre Tazi

16. Additional Plaintiff Alexandre Tazi purchased or otherwise acquired GSX securities on the NYSE during the Class Period and was thereby damaged, as stated in Mr. Tazi's certification and Schedule A, filed with this Amended Complaint as Exhibit B.

B. Defendants

1. GSX Techedu, Inc. ("GSX," "GSX Techedu" or the "Company")

17. Defendant GSX (now renamed Gaotu Techedu Inc.) is a Cayman Islands company limited by shares, with principal executive offices located at Tower C, Beyondsoft Building, 7 East Zone, 10 Xibeiwang East Road, Haidian District, Beijing 100193, China. During the Class Period, the Company's securities traded in an efficient market on the New York Stock Exchange under the ticker symbol "GSX."

18. Defendant GSX is liable for the acts of its executives, directors, officers, and agents at common law and under the doctrine of *respondeat superior* because all the wrongful acts and omissions complained of in this Amended Complaint were carried out during and within the scope of each such person's employment. The scienter of GSX's executives, directors, officers, and agents is similarly imputed to GSX under established agency principles.

2. Individual Defendants

19. Defendant Larry Xiangdong Chen ("Chen") founded GSX and served as GSX's Chairman and Chief Executive Officer at all relevant times. Before establishing GSX in 2014, Chen was the President of GSX's competitor, New Oriental Education & Technology Group, Inc. ("New Oriental"). Chen works out of GSX's Beijing headquarters.

20. Defendant Shannon "Nan" Shen ("Shen") has served as GSX's Chief Financial Officer since December 2018. Before joining GSX, Shen was the Chief Financial Officer of China SinoEdu Co., Ltd. ("SinoEdu"), which specialized in English as a Learned Language

(“ELL” or “ESL”) courses, from November 2017 through November 2018. Between February 2012 and November 2017, Shen held several positions at PricewaterhouseCoopers. On April 2, 2018, during Shen’s tenure at SinoEdu, SinoEdu was accused publicly of failing to pay its instructors and for mishandling their instructors’ visa sponsorships. Shen works out of GSX’s head office in Beijing.

21. All references to “Individual Defendants” are to Chen and Shen, jointly and severally.

22. The Individual Defendants possessed the power and authority to control the contents of GSX’s SEC filings, press releases, and other market communications. The Individual Defendants were provided with copies of GSX’s SEC filings and press releases alleged in this Complaint to be misleading prior to or shortly after their issuance and had the ability and opportunity to prevent their issuance or to cause them to be corrected. Because of their positions with GSX, and their access to material information available to them but not to the public, the Individual Defendants knew that the adverse facts specified in this Complaint had not been disclosed to and were being concealed from the public, and that the positive representations being made were then materially false and misleading. The Individual Defendants are liable for the false statements and omissions pleaded herein.

23. All references to the “Defendants” in this Amended Complaint are to GSX, Chen, and Shen, jointly and severally.

IV. SUBSTANTIVE ALLEGATIONS

A. Company Background

1. Company Operations

24. During the Class Period, GSX was an education company whose stated mission is to “[m]ake education better through technology.” During the Class Period, GSX represented that

its “core expertise” is in providing K-12 educational and after-school tutoring courses in China through an “online live large-class format.”

25. GSX’s² K-12 courses cover various academic subjects, including mathematics, English, Chinese, physics, chemistry, biology, history, geography, and political science. GSX also provides English courses for children in kindergarten, and courses that help children in grade one through grade seven. In addition, GSX offers foreign language courses comprising English, Japanese, and Korean, as well as English test preparation courses for students taking post-graduate entrance exams, and professional courses primarily for working adults preparing for professional qualification exams. Further, GSX offers personal interest courses, such as yoga, fashion, guitar, and Chinese calligraphy.

26. GSX operates “Weishi,” an interactive learning platform on WeChat through which it advertises and delivers its K-12 courses. “WeChat” is a widely-used Chinese multi-purpose messaging, social media and mobile payment app developed by Tencent Holdings Ltd.

2. GSX’s Revenue Is Based Primarily on Its K-12 Student Enrollments

27. Throughout the Class Period, GSX has routinely stated that its revenues are directly attributable to, and depend in significant part upon, recruiting new students and generating enrollments. During each earnings call and in each quarterly report that GSX issued throughout the Class Period, the Company attributed the reported increases in net revenue to corresponding increases in paid course enrollments.

² This Complaint refers to GSX’s Class Period activities in the present tense. After the close of the Class Period, the PRC government issued new rules curtailing the business of for-profit K-12 education companies like GSX. GSX currently earns most of its revenues from adult education, although its operations are in flux.

28. Defendant Shen expressly noted the percentage of revenue from K-12 courses each quarter during the Class Period, and note that growth in this area was the primary reason for the growth in the Company.

29. Specifically, in 2Q2019, net revenue from K-12 courses accounted for 76.4% of net revenues; in 3Q2019 net revenue from K-12 courses accounted for 82% of net revenues; in 4Q2019 net revenue from K-12 courses accounted for 83% of net revenues; in 1Q2020 net revenue from K-12 courses accounted for 86% of net revenues; and in 2Q2020 net revenue from K-12 courses accounted for 84% of net revenues.

30. During a teleconference with investors May 6, 2020 at 12:00 GMT, Defendant Shen stated that GSX's "K-12 revenue growth has exceeded 400% each quarter since we went public." Defendant Shen also stated: "The continued growth of gross billings from new paid enrollments also explains why our revenue is consistently able to increase both on a year-over-year and quarter-over-quarter level."

31. Accordingly, GSX has represented consistently that the revenues generated from its K-12 course enrollments accounted for over 80% of all net revenues for the Company throughout the Class Period.

32. As alleged in detail below, GSX did not disclose that it falsified more than 70% of its reported K-12 course enrollment numbers throughout the Class Period. Accordingly, as the revenues generated from its K-12 course enrollments accounted for over 80% of all net revenues for the Company throughout the Class Period and as over 70% of those enrollments were falsified, the Company falsified over half of its total revenues throughout the Class Period.

B. The Company Has Repeatedly Falsified More than 70% of Its K-12 Student Enrollment and More Than Half of Its Revenues

1. Expert Analysis of Anomalies in the Company's Course Login Data Shows that 70% of the Company's Students Are "Bots"

33. Dr. Craig Knoblock is an expert in computer science and "bots." He is the Keston Executive Director of the Information Sciences Institute, Research Professor of Computer Science & Spatial Science, and Vice Dean of Engineering at the University of Southern California and the co-founder and chief scientist of Fetch Technologies, a bot-driven data mining enterprise. He is a Fellow of the Association for the Advancement of Artificial Intelligence and the Association of Computing Machinery. In the past, Dr. Knoblock's research has centered on examining and establishing techniques for describing, acquiring, and exploiting the semantics of data through, among other things, source modeling, schema alignment, ontology alignment, entity linking, data cleaning, information extraction, and web data extraction. Dr. Knoblock has authored more than 400 peer-reviewed journal articles, book chapters, and conference and workshop papers. From 2007 through 2015, Dr. Knoblock served as Trustee of the International Joint Conferences on Artificial Intelligence; as President of the International Joint Conferences on Artificial Intelligence from 2011 through 2013; and as Past President of the International Joint Conferences on Artificial Intelligence from 2013 through 2015. On July 29, 2014, he was awarded the Robert S. Engelmere Memorial Lecture Award from the Association for the Advancement of Artificial Intelligence. In his role as chief scientist at Fetch Technologies, Dr. Knoblock developed systems that make extensive use of bots to mine data from websites. In perfecting such systems, Dr. Knoblock has developed and employed techniques to avoid automatic bot detection by, among other things, making the bots act more like humans. Plaintiffs have consulted with, and base their allegations in part on, the expert factual analyses of, Dr. Knoblock.

34. Plaintiffs engaged Dr. Knoblock to conduct an independent assessment of user login data published by the research firm Muddy Waters and of conclusions Muddy Water's drew from these data in Muddy Waters May 18 and 28, 2020 published research reports.

35. Dr. Knoblock analyzed sign-in statistics from data taken by Muddy Waters from Genshuixue and Gaotu users, and concluded from this data that it is highly likely that 70% or more of GSX Techedu's purported sign-in records are not from human students, but are instead records generated by "bots" signing in to the classes automatically. In reaching his conclusion, Dr. Knoblock reviewed the data analyses detailed in the May 18 and May 28, 2020 reports by Muddy Waters. Dr. Knoblock took the facts and data as stated in these reports to be true (they are), and reached his conclusions independently based on those facts.

36. According to Dr. Knoblock and Muddy Waters, four anomalies appear in the Company's class login data that are best explained by the Company's systematic use of bots to falsify student logins. *First*, more than half of users joined the classes at the exact same second prior to the start of class on different weeks ("Same-Second, Different-Week" joiners) (or they can be linked to one of these users by either joiner at the same time or from the same IP address). For example, a student who joined a class at 1:22:38PM one week, and then joined at 1:22:38PM one or more different weeks is a Same-Second, Different-Week joiner. *Second*, nearly one-third of students logged into the classes using the same IP address a teacher or tutor used ("Student-with-Teacher-IP" joiners). As GSX has no physical classrooms where devices could be shared in person, that one-third of students should share the same IP address as a teacher can only be explained by teachers and tutors logging in pretending to be students on their phones or computers using bot software. *Third*, large groups of users routinely join at the same second more than five minutes before or after the start of a class ("Burst" joiners). These bursts often

take place in the midst of little or no other joining activity. These bursts are best explained as cell phones in bot farms signing on automatically in tandem as fake students. *Fourth*, nearly one in seven users login to online classes implausibly early—thirty minutes or more before the start of class. While one might expect, for various unusual reasons, that one or two students in a large class might log in this early, that one in seven students would log in more than thirty minutes before class defies the experience of anyone familiar with student life.

37. Muddy Waters found that these anomalies alone are associated with greater than 70% of the users. Dr. Knoblock likewise concluded that the four anomalies are associated with at least 70% of the users, such that at least 70% of the students purporting to login to GSX classes are highly likely, and certainly more likely than not, to be fake—according to Dr. Knoblock, at least 70% of the logins are best explained as bots rather than human users.

38. The data Muddy Waters used in its analysis were 463,217 sign-on records for 54,065 Genshuixue and Gaotu users across more than 200 paid K-12 classes in the first half of 2020. Muddy Waters gathered the data included in its reports from publicly accessible sources. Gathering data from Gaotu100.com and Genshuixue.com required separate approaches. The Genshuixue.com platform has both a website and a desktop application that students can use. Once a user signs up and logs in, the user opens Google Chrome Developer tools, turns on the Network tab, switches to XHR and sees data being passed between the browser and the Genshuixe.com website. Inside of this data there is a wealth of information including archives of every class session purchased. This data was used to perform analyses of bot activity on both platforms.

39. Gaotu100.com is very similar in design and functionality to Genshuixue and shares domain names and resources with Genshuixue. After setting up an account and

purchasing classes, some data in the browser becomes available to the user, and this data was included in the analyses. Additional data was gathered after installing the Gaotu100.com app on a phone and configuring the device to send data through an intercepting HTTP proxy. This method enabled collection of messages and data between the phone and the GSX servers, and revealed the path to the class data archives. After locating the class archives, the files for each of the purchased classes were downloaded and examined. The files included extensive information about the users, including User Number, Name, Alternate Name, Avatar, User Type (0,1,2), Course ID and/or Class ID (Gaotu only has Class ID's), Class Join and Exit Times, and IP address.

40. The samples included over 200 paid K-12 classes purchased between January and March 2020, almost equally divided between Gaotu100.com and Genshuixue.com. The sample was randomly chosen, within these constraints. The classes spanned K-12 grade levels and subject matter. In total, the data set included 463,217 logins made by 54,065 unique users (students, tutors, and teachers). Gaotu was busier, accounting for approximately two-thirds of the logins.

41. Notably, the class data include User Numbers (which are also displayed in the class attendance records) and User Types. By cross referencing the class data with data displayed in teacher and tutor pages on genshuixue.com, it can be determined that 100% of the teachers listed on the genshuixue.com were marked as Type 1 users, and 100% of the tutors listed on genshuixue.com were marked Type 2. As all Type 1 and 2 users are teachers or tutors, Type 0 records are student users. In this way, users may be identified as students, teachers or tutors. The dataset of users contained 29 Type 1s (teacher), 371 Type 2s (tutor), and 53,694 unique Type 0s.

a. “Same-Second, Different-Week” Joiners

42. *First*, over half (52.8%) of the unique users in the sample were identified as bots because they are Same-Second, Different-Week Joiners, or are linked to them. Same-Second, Different-Week Joiners are users who join a class at same time—to the second—on the same day of at least two different weeks, and the users linked to them. Dr. Knoblock has opined that the probability of such a precise login happening two or more times for a single user in a single course is extremely low. In addition to the natural variability in the time at which a (human) user logs in, there are moment-to-moment differences in the way internet traffic and data within GSX’s own network flow that make logging in at the same precise second one or more weeks apart extremely unlikely unless attempted repeatedly through automation. Muddy Waters provided a useful analogy: the phenomenon evidenced by Same-Second, Different-Week joiners is similar to a weekly flight from City A to City B touching down two or more times at exactly the same second.

43. Within the dataset of 54,065 unique users, Muddy Waters found 5,742 users (10.6%) whose logins record this Same-Second, Different-Week joining phenomenon. Note also that 100% of these Same-Second, Different-Week Joiners exhibited at least one of the other bot behaviors discussed below.

44. While most Same-Second, Different-Week Joiners recorded only one same-second, different-week join (two different occasions with logins at the same second), 1,261 (21.6%) unique Same-Second, Different-Week Joiners recorded a same-second, different-week join on two or more occasions.

Frequency of Precise Joins by User									
Frequency	All Types			"Students"			"Tutors"		
	Total All Types	% Total Uniques	% of Precise Joiners	Total Type 0	% Total Uniques	% of Precise Joiners	Total Type 2	% Total Uniques	% of Precise Joiners
Users with 1 Precise Join	4,584	8.479%	78.55%	4,518	8.357%	77.42%	66	0.12%	1.13%
Users with 2 Precise Joins	493	0.912%	8.45%	481	0.890%	8.24%	12	0.02%	0.21%
Users with 3 Precise Joins	543	1.004%	9.30%	529	0.978%	9.06%	14	0.03%	0.24%
Users with 4 Precise Joins	106	0.196%	1.82%	105	0.194%	1.80%	1	0.00%	0.02%
Users with 5 Precise Joins	69	0.128%	1.18%	69	0.128%	1.18%	0	0.00%	0.00%
Users with 6 Precise Joins	25	0.046%	0.43%	25	0.046%	0.43%	0	0.00%	0.00%
Users with 7 Precise Joins	12	0.022%	0.21%	12	0.022%	0.21%	0	0.00%	0.00%
Users with 8 Precise Joins	3	0.006%	0.05%	2	0.004%	0.03%	1	0.00%	0.02%
Users with 9 Precise Joins	1	0.002%	0.02%	1	0.002%	0.02%	0	0.00%	0.00%
Sub-total	5,836	10.794%	100%	5,742	10.621%	98.4%	94	0.174%	1.6%

45. These Same-Second, Different-Week Joiners are linked to 33,145 additional users who share the same distinct IP address and users who joined classes at the exact same moment (often as part of large bursts). After subtracting 10,342 duplicates, there are 28,545 total users (52.8%) that are Same-Second, Different-Week Joiners or linked to them, and so are likely on this basis to be bots.

Sum of "Student/Bot" Precise Joiners & Linked Users						
	Total	% of Total Uniques	Total Joins	% of Total Joins	Total IPs	% of Total IP Address
Precise Joiner, Student	5,742	10.6%	95,988	20.72%	27,001	16.35%
Joined at same precise second as another Precise Joiner	27,992	51.8%	318,861	68.84%	105,586	63.95%
Shared a distinct IP address with another Precise Joiner	5,153	9.5%	75,116	16.22%	27,414	16.60%
Total Unique Precise Joiner-Linked Users (sum of 3 lines above less overlapping data points)	28,545	52.8%	325,711	70.3%	107,045	64.8%

b. Student-with-Teacher-IP Joiners

46. *Second*, "Student-with-Teacher-IP Joiners" may be defined as purported student users that use the same IP address as a teacher or tutor. An IP address is a numerical label assigned to each unique device connected to a computer network that uses the Internet Protocol. Each IP address is associated with, for example, a single connected cell phone or laptop computer. 15,239 purported student users (28.2%) in the dataset logged into classes using the same IP address as a teacher or tutor on at least one occasion. As GSX has no physical classrooms where devices could be shared in person, that one-third of students should share the

same IP address as a teacher can only be explained by teachers and tutors logging in as students on their phones or computers using bot software. Adding Student-with-Teacher-IP Joiners to the count of unique users highly likely to be bots brings the total to 34,534 users, or 63.9%, after eliminating duplicate unique users.

47. Another 1,364 unique users are linked through shared IPs to these Student-with-Teacher-IP Joiners, bringing the total percentage of unique users identified this way to 16,603, which is 30.7%. In the dataset, there are 10,614 Student-with-Teacher-IP Joiners (63.9%) that are also Same-Second, Different-Week Joiners. Almost two-thirds of Student-with-Teacher-IP Joiners are also Same-Second, Different-Week Joiners, which reinforces the conclusion that these users are bots.

"Student" Users Linked to GSX Teacher & Tutor IPs						
User Description	Total	% of Total Uniques	Total Joins	% of Total Joins	Total Distinct IPs	% of Total Distinct IPs
Unique Teachers & Tutors*	394	0.73%	7,700	1.66%	743	0.5%
Unique users sharing a distinct IP with a Teacher / Tutor ("Student")	15,239	28.19%	182,344	39.36%	24,016	14.5%
Unique users sharing a distinct IP with a "Student/Bot"	1,364	2.52%	13,484	2.91%	28,817	17.5%
Total unique GSX-linked "Student/Bot" users*	16,603	30.71%	195,828	42.28%	47,583	28.8%

*Eliminates overlapping data points for IP addresses and teachers/tutor counts.

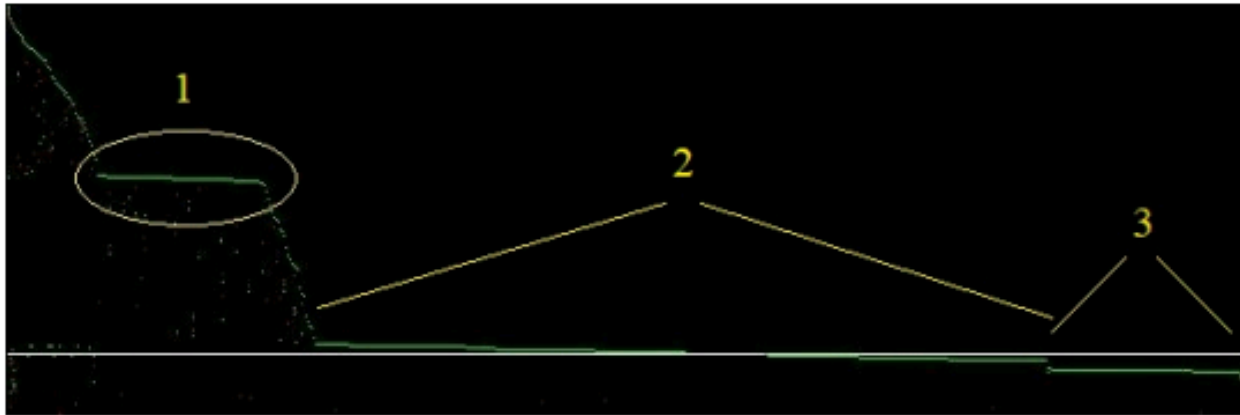
Sum of "Student" Precise Joiners & Linked Users						
Unique Users When Combining Precise Joiners, Precise-Joiner Linked Users & GSX-Linked "Student/Bot" Users	Total	% of Total Uniques	Total Joins	% of Total Joins	Total IPs	% of Total IP Address
	34,534	63.9%	359,690	77.7%	112,281	68.00%

c. Burst Joiners

48. *Third*, large groups of users routinely join at the same second, in "bursts," more than five minutes before or after the start of a class ("Burst Joiners"). These bursts often take place in the midst of little or no other joining activity. These bursts are caused by cell phones in bot farms signing on automatically in tandem as fake students.

49. The Burst Joiner pattern for a given class can be visualized in a graph on which the vertical Y axis is time, broken into increments of one second, and the horizontal X axis is the number of unique user joining at that second. The horizontal white line represents the second at

which the class started—joining below the white line occurred after the start of class. Bursts of joining activity appear on the graph as three long horizontal lines, marked 1, 2, and 3. The data for the graph below comes from a class for a paid upper grade elementary school math course on the GSX platform that runs over several months. The below pattern is typical of the pattern for joining in classes in the dataset.



50. In Burst 1, 104 unique users joined during a four second period that began nine minutes 40 seconds before the start of class.

51. To be conservative, Muddy Waters' analysis did not count bursts that occurred five minutes before class started through five minutes after class started, unless the logins exhibited some other bot behavior (including being a Same-Second, Different-Week Joiner). Accordingly, Muddy Waters largely excluded Burst 2 from its analysis.

52. Although Burst 3 occurs at four minutes seven seconds after class starts (within the five minute window), these joiners are counted as bots because during this three second window, among the 96 stragglers were three Same-Second, Different-Week Joiners that joined this particular class at the same second.

53. Dr. Knoblock has opined that Burst Joiners cannot be explained by reference to purported simultaneous automatic switching over of users from tutorial prep sessions to a main

class when the class begins. According to Dr. Knoblock, as the dataset shows, many of these joiners occur after the class has started, and only a very poorly designed automated bot would transition students from a tutorial prep session to a main class after the class has begun.

54. Moreover, Muddy Waters analyses specifically excluded users who joined within five minutes before or after the start of a class, unless other data indicated that the users were bots. Dr. Knoblock has opined that routine bursts of joiners well before the start of a class (more than five minutes) cannot plausibly be explained by any purported automated switching of users from tutorial prep sessions to a main class when the class starts because it is implausible that software engineers would design such automated switching to occur more than five minutes prior to the start of class, and for it to occur at different times for different tutors.

55. Dr. Knoblock has opined that GSX's claim that automatic switching from tutorial prep sessions to the main classes explains Same-Second, Different-Week Joiner is also wrong. In a Chinese WeChat response to the Muddy Waters report, GSX stated that if a tutor has not switched the small class over by the start time of the large class, the system will automatically perform the switch. However, only 5,742 unique users were Same-Second, Different-Week Joiner, which was 10.6% of the sample. GSX states that such small class to large class switches are "typical", and that there is an automatic switch for tutors that fail to switch by the class start time. If GSX's explanation were accurate, then any student whose tutor failed to switch the class over by its start for at least two of their classes would be a Same-Second, Different-Week Joiner. They would account for far more than 10.6% of the sample.

d. Early Joiners

56. *Fourth*, nearly one in seven users login to online classes implausibly early—thirty minutes or more before the start of class ("Early Joiners"). These Early Joiners are very likely to be bots. While one might expect, for various unlikely reasons, that one or two students in a large

class might on occasion log in this early, that one in seven students in every class would log in more than thirty minutes before class begins defies the experience of anyone familiar with student life or online meetings in general. For example, to log into a Zoom videoconference more than 30 minutes early would be highly unusual.

57. The total number of unique Early Joiners in the sample was 7,579 (14.0%), of which 3,676 (48.5%) exhibited at least one of the other assumed bot behaviors, which reinforces the value of early joining as an indicator of bots. After eliminating the duplicates from other categories of anomalies, there were 3,903 (7.2%) unique Early Joiners. If users that share Early Joiner IP addresses with Early Joiners are included, there are a total 4,143 unique Early Joiners (7.7%) in the dataset that do not exhibit additional bot behavior.

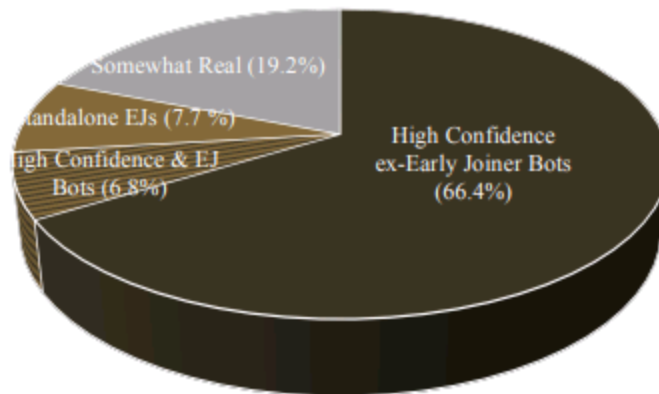
58. Dr. Knoblock has opined that Early Joiners cannot be explained as students logging into tutorial prep sessions that take place before the start of a class, as the login data in Muddy Waters' dataset is login data for main classes rather than tutorial sessions.

59. Students enrolled in GSX are not likely to differ markedly from other Chinese students (or students in any classroom globally with which Plaintiffs are familiar) who do not exhibit this behavior of logging in or arriving to a class en masse half an hour early. The most plausible explanation is that these logins are not from humans, but rather from bots.

e. Combined, These Analyses Show that at least 70% or More of the Companies' Users Are Bots

60. Muddy Waters found that these anomalies alone are associated with more than 70% of the users. That is, under Muddy Waters analysis, more than 70% of the students purporting to login to GSX classes are highly likely, and certainly more likely than not, to be fake.

Early Joiners + High Confidence Bots



61. Dr. Knoblock reached the same conclusion after independently reviewing Muddy Waters’ data. Dr. Knoblock concluded that the four anomalies are associated with at least 70% of the users, such that at least 70% of the students purporting to login to GSX classes are highly likely, and certainly more likely than not, to be fake—according to Dr. Knoblock, at least 70% of the logins are best explained as bots rather than human users.

62. Accordingly, more than 70% of GSX user logins are bots rather than human users and are falsified.

2. Multiple Confidential Witnesses³ Confirm in Detail that GSX Techedu’s Customer Base is Grossly Inflated by Its Use of Bots and Other Methods to Falsify Student Enrollments

a. CW-1

63. Confidential Witness 1 (“CW-1”), a former GSX “Android Engineer” who worked at GSX’s Beijing headquarters in the “Sales and Marketing” department from approximately April 10, 2019 through approximately June 20, 2020, has firsthand knowledge of GSX’s rampant use of bots to falsify student accounts and to use those accounts log into classes

³ To protect their anonymity, all Confidential Witnesses are given feminine pronouns.

at specified times. According to CW-1, the accounts also were used to write positive reviews about the courses.

64. According to CW-1, the Beijing headquarters consists of dozens of “mobile phone rooms,” each packed with shelves of “many thousands” of mobile devices. GSX employs, and actively recruits, hundreds of engineers at the Beijing headquarters, “unlike any ordinary education company.” CW-1 was paid directly by GSX to “brush” course enrollments.

65. CW-1’s role as an “Android Engineer” was twofold. She spent about one-quarter of her time harvesting user data from private WeChat accounts to be used to set up fake student enrollment accounts. The other three-fourths of CW-1’s time was devoted to “reverse engineering codes” for Android mobile devices, and then reprogramming such devices with the codes that CW-1 generated. After programming a given device with a given code, it would execute specified commands automatically. Most devices were set up with the user data that CW-1 harvested from WeChat accounts and were programmed with bots that would automatically open WeChat with the stolen user data, enroll in GSX’s promotional courses, log-in to the classes at specified times, and then write positive reviews about the courses. A smaller number of devices were programmed to open WeChat and then send thousands of advertisements for GSX courses to random WeChat account users, others were programmed to “contact students” through WeChat, while still others “taught classes” on GSX’s Weishi platform.

66. According to CW-1, some of the Sales and Marketing personnel, including fellow “engineers,” also taught classes but did not have teaching credentials.

b. CW-2

67. Confidential Witness 2 (“CW-2”) is a former GSX engineering manager who worked at GSX’s Beijing headquarters beginning in 2015, and has direct knowledge of all three

ways in which GSX falsified student enrollment figures. In her role as engineering manager, CW-2 directly supervised software engineers, among other responsibilities.

68. According to CW-2, GSX began using bots to “brush” enrollments in 2015. In that year, GSX had “few students,” but GSX “want[ed] the teachers to feel that there were many.” In a class of “just five students,” for example, GSX would enroll “500” bot-generated users, “letting the traffic volume become very big” so that the students and teachers would “feel that the platform’s volume was huge.”

69. CW-2 explained that, to accomplish this, throughout the Class Period GSX’s engineers installed a software known internally as “Group Control” through which GSX instructors and tutors remotely manipulated and programmed the behavior of registered student accounts. These accounts ran the software applications that other engineers, such as CW-2, installed on thousands of mobile phone devices, which became bot-controlled devices that GSX operated from its headquarters. According to CW-2, each of these bot-controlled devices is assigned to a registered mobile phone number, and GSX’s engineers assigned to each bot-controlled device a WeChat account number (which, in China, must be linked to a real person) and then programmed the bot-controlled device with the “Group Control” software and several other codes. When executed, these other codes caused the bot-controlled devices to purchase course enrollments, sign into and out of classes, create new student accounts, and send messages to other students, tutors, and instructors.

70. According to CW-2, more than half of the office space at GSX’s Beijing headquarters is occupied with servers, each of which controls approximately 1,000 bot-controlled devices. According to CW-2:

GSX itself has a room, in this computer room there are over 10,000 machines, we call them the group robots, which is used to control [the operation]. One person

can control about 1,000 cell phones without a problem, and these can be operated remotely or from the room, I can control all of the machines. Then I can imitate the data generated by a real student or real buying, this is already a very mature technology.

71. Specifically, GSX's instructors and tutors used "Group Control" to program the Bot-Controlled Devices' general rates and patterns of attendance over the course of a semester ("personality traits"), and to manipulate the Bot-Controlled Devices' rates and patterns for each course session ("behaviors").

72. In addition to her knowledge of GSX's use of bots to falsify student enrollments and activity, CW-2 also has knowledge of GSX's two other two additional brushing schemes. As explained further by CW-3, GSX contracts with third-party brushing firms to brush its enrollment figures further. In this scheme, CW-2 explained that she "would sign a contract with [the third-party brushing company], I would put 1,000,000 RMB into ads, and [the third-party brushing company] would promise me, for example, that 2%, that [the third-party brushing company] can keep 20,000 RMB" as "commission." In this scenario, according to CW-2, the third-party brushing company was required to use the remaining 980,000 RMB to purchase GSX's class with "virtual cell numbers or WeChat account numbers." GSX reported these enrollments as "revenues" and reported the commissions as sales and marketing expenses. Depending on the number of enrollments a given third-party brusher could fabricate, the commissions ranged between two and five percent of the course's tuition price. Other third-party brushers specialized in fabricating attendance data for GSX, according to CW-2.

73. Next, GSX paid instructors and tutors to brush sales. CW-2 recalled she entered contracts with certain of the Company's instructors and tutors, pursuant to which GSX agreed to promote their courses with "ads" and other promotional materials in exchange for the instructors' and tutors' agreements to purchase fake enrollments. In this scenario, GSX advanced the

instructors and tutors “1,000,000 RMB,” which the instructors and tutors used to purchase enrollments. The Company’s instructors and tutors were motivated to do so, CW-2 explains, because the Company promoted their courses on the “platform-run ads.” Although no financial consideration was exchanged, this tit-for-tat “commission” or “payment” induced several instructors and tutors to participate in this scheme.

74. Just as in the second scheme, the RMB 1,000,000 gets recorded as marketing expenses. As CW-2 explained, the scheme “just takes the 1,000,000 RMB and round trips it.”

c. CW-3

75. The Company falsified student enrollments, including student enrollments in regularly priced courses, using third parties, according to Confidential Witness 3 (“CW-3”), who also has first-hand knowledge of GSX’s pervasive “brushing” activities.

76. CW-3 was employed by a third-party brushing firm in Beijing from January 1, 2019 through December 31, 2019. In this role, she was regularly paid commissions by GSX to enroll in GSX’s courses with fake or assumed identities and to write positive reviews. CW-3 explains that “GSX management” had a contract with this third-party brusher, pursuant to which CW-3 and her colleagues would assume the identities of “and conduct activities as if [they] were real students.” CW-3 would “buy classes, write positive reviews, and join in the large classes to boost up [GSX]’s head counts” with harvested user data from various social media platforms, including WeChat. According to CW-3, in 2019, the third-party brusher’s employees, including CW-3, accounted for approximately 40% of all enrollments in GSX’s K-12 courses, and wrote approximately 35% of the positive reviews for GSX’s K-12 instructors. That is, the third-party for which CS-3 worked falsified approximately 40% of all enrollments in GSX’s K-12 courses in 2019. GSX paid the third-party brusher 50 RMB per enrollment.

77. GSX planned its third-party brushing months in advance. Each quarter, GSX prepared and sent a “detailed brushing plan” to the third-party brusher. These plans specified the dates, times, course titles, tuition rates, and instructors for whom the third party was to focus its brushing efforts. CW-3 and her colleagues referenced and used these plans daily to ascertain the GSX courses in which to enroll and then attend, and the GSX instructors about whom to write positive reviews.

78. As part of the scheme, when the Company sent its brushing plans to the third-party each quarter, GSX concurrently transferred the full amount of the tuition fees, together with commissions, for the agreed-upon fake enrollments. Thus, each time CW-3 and her colleagues enrolled a fake student in one of GSX’s courses, GSX was not generating new revenue or acquiring any customers. Instead, the Company was paying the third-party brusher to generate fake student enrollments.

d. CW-5

79. Confidential Witness 5 (“CW-5”) is a former customer and former student of GSX, and has firsthand knowledge from the perspective of a student that GSX enrolled fake “students” in its classes. CW-5 is also an independent English teacher who operates a private English vocabulary learning platform in China, “CW-5 English.” Since 2008, CW-5 has posted blogs about her English-learning journey and has authored an English vocabulary book for Mandarin speakers. On or about July 13, 2016, CW-5 paid GSX to market her services as an independent English teacher.

80. In September 2019, after receiving an unsolicited advertisement from GSX in her business’s official WeChat account, CW-5 enrolled in GSX’s 200-session high-school level promotional English vocabulary course titled “Magnetic Levitation 38000” and paid RMB5,080

in tuition (USD \$707.66⁴). The course was to meet for four hours per day, five days per week. Upon enrolling in the course, CW-5 received invitations to join two WeChat groups, one for students enrolled in the course, and the other for parents of students enrolled in the course. Classes began at 8:00 a.m. on the morning of September 3, 2019.

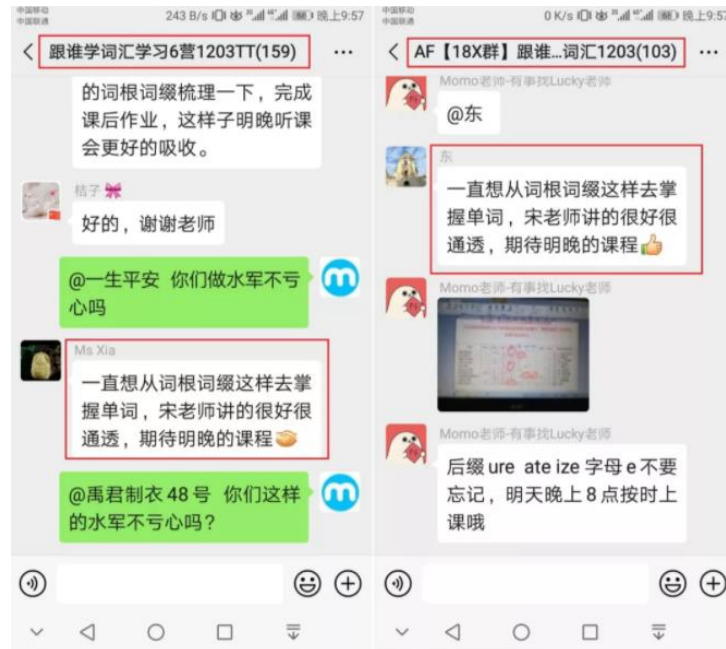
81. On the first day of class, the instructor taught for about one hour, after which “there was nothing” in the classroom, so CW-5 sent a message to the student and parent WeChat groups, inquiring whether any others were suddenly unable to view the course content. In the parent group, two users, each purporting to be parents of enrolled students, responded within seconds of each other with identical messages, explaining that it was the “Self-Study Period.”

82. Approximately ten minutes after the class period ended, at around 12:10 p.m., individuals purporting to be students and parents, each “with different WeChat IDs sent out as many as five groups of almost identical praise” for the instructor in both the student group and in the parent group.

83. For example, two “different” individuals in both groups said: “Teacher Song really hit the nail on the head, love it,” using identical Chinese characters in the same order.

84. In another example, two “different” individuals in both groups said: “I always wanted to learn from root words like this, Teacher Song did very well. Perfect, looking forward to tomorrow’s class,” using identical Chinese characters in the same order:

⁴ Board of Governors of the Federal Reserve System, *Foreign Exchange Rates—H.10: United States Dollars to Chinese Yuan Renminbi* (Sept. 3, 2019), https://www.federalreserve.gov/releases/h10/hist/dat00_ch.htm.



85. In another example, two “different” individuals in both groups said: “I enjoy this methodology for memorizing words. Doing more with less, I like it,” using the same Chinese characters in the same order:



86. In another example, two “different individuals in both groups said: “The teacher speaks very well, very helpful for children. Great!,” using the same Chinese characters in the same order.

87. According to CW-5, each of the class sessions she attended followed the same routine: an instructor would teach for about one hour and then leave the platform. Ten minutes after the class was scheduled to end, different users in both the student and parent groups would post favorable reviews of the lesson and of the instructor using identical grammatical syntax.

88. On December 5, 2019, CW-5 published an article through her business’s official WeChat account. In the article, CW-5 claimed that most of the positive reviews were written by GSX personnel, who hacked the user IDs of random WeChat users, enrolled in the courses, and then wrote the reviews after each class.

89. The same day, a representative from GSX’s legal department sent CW-5 a message to CW-5’s official WeChat account and threatened her with legal action:

GSX Legal: [CW-2], here is how it is: Firstly, we offer free courses that are accessible to the public. There are teaching assistants in group chats who regularly notify people to attend classes in order to ensure that everyone has a satisfactory experience; there is no sign of fraud. Secondly, your article consists of assumptions and speculations about our company. If such content brings harm to our company’s reputation, among other aspects, we intend to resolve these issues through reasonable and effective legal action.

[CW-1]: Well, prove that the five groups of identical positive reviews I included in my article are not a coincidence.

[CW-1]: But having said that, what happens if I continue to find many similarities amongst positive reviews in the future?

[CW-1]: We can follow the legal procedure now if you would like.

e. CW-6

90. Confidential Witness 6 (“CW-6”), a former GSX tutor, has first-hand knowledge of GSX’s pervasive “brushing” activities and of the actual qualifications of GSX’s instructors and tutors.

91. CW-6 worked as a “tutor” of first-year high school chemistry for GSX’s Gaotu Classroom brand at Zhengzhou Center from approximately June 15, 2019 through July 31, 2019. She worked alongside approximately 40 other first-year high school chemistry tutors, and according to CW-6, “each tutor had about 200 students.” In this role, CW-6’s job duties were to solicit potential customers and enroll new customers in promotional courses.

92. CW-6’s duties were twofold. She spent less than 30% of her time “assisting instructors in teaching, grading students’ assignments, answering students’ questions, and communicating with parents in WeChat groups.” The lion’s share of her time—more than 70%—was devoted to sales. At GSX’s instruction, CW-6 and the other tutors “encouraged clients of the trial lectures to purchase regular-priced courses, and at the end of each course period, they encouraged the clients to renew their purchases.”

93. CW-6 and the tutors routinely assumed alternative identities to purchase promotional courses to inflate enrollment numbers. CW-6 and the tutors did this using the WeChat credentials of former “one-time” promotional-course purchasers who did not continue their enrollments. CW-6 and the other tutors took screenshots of these sham transactions and sent them to the current “one-time” customers, claiming falsely that there “were only a few spots left” in the given course, hoping to induce more demand. Moreover, to “liven up the atmosphere” among customers, CW-6 and the other tutors routinely “brushed” course reviews in the WeChat groups, at GSX’s direction.

f. CW-7

94. Confidential Witness 7 (“CW-7”), a former GSX employee, worked as an “Account Manager” for the VIE in Changsha, from August 15, 2016 through March 31, 2019. In this role, CW-7 was responsible for recruiting instructors and tutors across all of GSX’s brands. CW-7 has first-hand knowledge of the actual qualifications of GSX’s instructors and tutors because she was responsible for recruiting, hiring, and retaining them. She reported to the General Manager of the VIE’s Changsha branch.

95. According to CW-7, GSX’s most “popular” instructors paid GSX a fee ranging between ¥10,000 and ¥200,000 to help the instructors “with marketing and sales, client management, and course design.”

3. A Study by Citron Research Further Confirms GSX Falsified the Majority of Its Revenues

96. That GSX falsified the majority of its revenue is confirmed by a study conducted by the research group Citron Research published April 14, 2020.

97. Citron selected and paid for the most popular classes taught by “Star Teachers” with a significant sample size of more than 20% of total available classes. Citron tracked the number of students and actual discounted course fees for more than 20% of total available classes during the first quarter of 2020. The total revenues from the amount of student IDs Citron found equaled around 70.9 million RMB. Citron extrapolated the revenues from this sample onto the rest of the remaining untracked classes, arriving at an estimate of K-12 first quarter 2020 revenue of 316 million RMB—a 60% discrepancy compared to reported K-12 fourth quarter of 2019 revenue of 773 million RMB. Citron conservatively estimated the revenue overstatement for 2019 to be as much as 70% given that GSX’s growth rates nearly doubled every quarter for the past four quarters.

98. Citron further found evidence in GSX's promotional WeChat groups signaling duplicate student accounts and fake students. Promotional WeChat groups contained overly positive, frequent, and identical comments. 70% of course comments were given by accounts with names that correspond to students of the ancient Chinese philosopher, Confucius. Many accounts were also found to use fake profile pictures.

99. Citron also revealed that GSX inflated their numbers through duplicate classes. Given a sampling of 100 different courses across the six primary levels on GSX's website, there are effectively only 20 paid programs when free classes, summer classes, and duplicate programs are excluded.


100. Citron compared net profits in GSX's SEC filings and Chinese official government filings, finding a 75% discrepancy. The Company responded that the discrepancy was due to a GAAP different between China and the United States after a restructured spin-off business in 2017. However, Citron did not find any disclosure surrounding a spin-off or divestiture during this period.

4. Preserved Public Job Postings Show that the Company Hired Employees for Brushing

101. GSX openly recruits for engineers to develop and maintain its "bot farm." The images below are of a recent public job postings for GSX. The posting was picked up by a user of China's Snowball Finance (雪球) who on May 6th, posted the screenshot and asked, "do you understand what this is for?"⁵ The job post is for a GSX "server room operation and maintenance engineer."

⁵ Láizì Android (来自Android), \$Gēn Shéi Xué (GSX)\$ Dǒng De Shuō Zhè Shì Zhāo Rén Gànshénme (\$跟谁学(GSX)\$ 懂的说说这是招人干什么), Běijīng Xuě Qiú Xìnxī Kējì Yǒuxiàn

102. The post reveals details about GSX's brushing operations.



跟谁学(GSX) 懂的说说这是招人干什么

BOSS直聘

机房运维工程师

肖旭 3日内活跃

跟谁学 · 机房运维主管

奖金绩效

年终奖1-4个月不等

职位详情

负责公司手机机房设备正常运行及维护

1. 机房内手机设备问题处理
2. 手机设备刷机, 安装各种框架软件如Xp和太极等
3. 华为云服务器维护及操作
4. 机房服务器及交换机日常运维
5. 完成机房建设及网络建设任务

Do you understand what this is for?

Server Room Operations & Maintenance Engineer

GSX, Server Room Operations & Maintenance Supervisor

Performance Bonus:
1-4 mos. based on end of yr. salary, varies

Duties:
Responsible for maintaining and operating company's sever rooms.

1. Resolving problems occurring with cell phone equipment in the server room.

2. Cell phone bot network equipment, install all types of framework software like Xp and TaiChi, etc.

3. Huawei servers maintenance and operations.

103. The job requires “maintaining and operating” the Company’s server rooms, which include “cell phone bot network equipment.” Specifically, the job requires “install[ation]” of “framework software” like “Xp” and “TaiChi” on the “cell phone bot network equipment.”

104. “Xp” refers to Xposed, a set of tools that allows an individual to “jailbreak” or “root” a phone (*i.e.*, modify the phone to permit installation of software that normally cannot be installed when the phone is received out of the box from the manufacturer due to manufacturer restrictions) in order to install restricted software—exactly what the Company must do in order to install its customized bot software on a collection of cell phones in “server rooms” in order to operate its bot farms.

(北京雪球信息科技有限公司) (May 6, 2020, 02:57 AM),
<https://xueqiu.com/5346637144/148620489> (underlines added).

105. TaiChi is a software program that is used in tandem with Xposed. According to its website, TaiChi supports a variety of Xposed modules enabling functions like a “fake device” and “fake location.” The software also boasts that the software is “hard to detect.”

106. A second recent job post, from April 29, 2020, is copied below.⁶ This job post also seeks cell phone engineers to be responsible for “rooting” or “jail breaking” cell phones, installing new software, and creating bots or fake users.⁷

手机运维工程师
Cell Phone Engineer, Operations & Maintenance

工作要求
工作地区: 北京 工作经验: 1年以内 职位类型: 全职
工资待遇: ¥ 5000-6000 学历要求: 大专以上
工作地址: 北京海淀区博彦科技大厦西楼

定期体检 节日福利 交通补助 包三餐 年终双薪

Job responsibilities: 1, responsible for rooting (jail breaking) cell phones, bots, and software installations. 2, WeChat registrations, and WeChat message initializations, etc.

岗位职责/工作内容/岗位要求
工作职责: 1、负责手机root, 刷机, 软件安装等 2、微信注册、微信信息初始化等 3、处理内部客户的技术问题 4、负责手机日常维护, 管理手机, 升级, 欠费充值, 解封好友等
任职资格: 1、踏实肯干, 积极主动 2、具备良好的团队合作精神和高度的责任感 3、具有较强的协调能力, 较强的抗压能力

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联系我们时, 请说明是在职友集看到的, 谢谢!
最近更新: 2020-04-29
来源网站: BOSS直聘

收藏该职位 立即申请 查看源网站> 举报该职位

BOSS直聘 职位已关闭
手机运维工程师 5-6K
北京 1年以内 大专

刘先生 HR · 我的关注

职位描述
工作内容:
1. 负责手机root, 刷机, 软件安装等
2. 微信注册, 微信消息初始化等
3. 处理内部客户的技术问题
4. 负责手机日常维护, 管理手机, 升级, 欠费充值, 解封好友等
任职要求:
1. 踏实肯干, 积极主动
2. 具备良好的团队合作精神和高度的责任感
3. 具有较强的协调能力, 较强的抗压能力

公司简介
熊掌 (股票代码: GSX) 是中国第一家在美国上市的中国K12在线教育机构, 主营业务为K12在线教育辅导课程以及成人在线教育课程。
2015年2月28日, 宣布A轮融资5000万美元, 刷新了中国创业公司A轮融资纪录。
2015年11月, 获得美国发布的2015中国成长最快科技公司(Acapo)

107. Together, these job posts further show that GSX operates large scale bot farms. These jobs are for posts that are wholly unrelated to, and unnecessary for, GSX’s normal operations. While GSX teachers and tutors may well communicate using work cellphones, the

⁶ BOSS Zhí Pìn (BOSS 直聘) (Apr. 29, 2020), [https://www.zhipin.com/job_detail/19bacff023f680b71Hd52Ni_FFM~.html?sid=seo_aladingb; Zhí Yǒu Jí \(职友集\), Shǒujī Yùn Wéi Gōngchéngshī \(手机运维工程师\) \(Apr. 29, 2020\), https://www.jobui.com/job/158236612/](https://www.zhipin.com/job_detail/19bacff023f680b71Hd52Ni_FFM~.html?sid=seo_aladingb;Zhí Yǒu Jí (职友集), Shǒujī Yùn Wéi Gōngchéngshī (手机运维工程师) (Apr. 29, 2020), https://www.jobui.com/job/158236612/). Note, the two posts are linked.

⁷ Bots and fake users are called “brushing” (刷) in Chinese, this can be thought of as a kind of automatic swiping function in an app, with the result that purchases, reviews, likes, comments or other such fake activities are created.

Company's business, as it has itself described it in public filings, has no need for dedicated employees to bypass cellphone manufacturer restrictions and systematically jailbreak phones in order to install illegitimate software. Dr. Knoblock has offered his expert opinion that the jailbreaking skills sought in these job postings are unrelated to, and unnecessary for, the operations of an online education company.

108. That GSX's job posts for engineers experienced in the operation and maintenance of large-scale bot networks have not all been taken down further evidences the degree to which GSX's operations rely on bots to falsify student users—as the vast majority of its users are fake, and as its operations rely in large part on the falsification of users, the company has little choice but to continue publicly recruiting experienced engineers in order to “grow” its falsified user base.

5. Bot Activity Permeates GSX's Alleged Business

a. Individual Employees Controlled Up to One Thousand Bots









109. GSX's engineers installed programming codes on the thousands of mobile devices that GSX kept at its headquarters and satellite offices. While most of the programs that Android Engineers like CW-1 installed on the devices caused the devices to run applications autonomously, certain others allowed one human user to control simultaneously up to one thousand devices remotely, through a separate application that the GSX engineers also developed. According to CW-1, GSX referred to this application as “Group Control.”

110. According to CW-2, each GSX instructor and tutor was required to download GSX's applications to her personal device upon accepting a position with GSX. The instructors and tutors also were required to use “Group Control” during each class.

111. According to CW-1, when using the “Group Control” program, tutors drafted and sent “questions” for the bot-controlled devices to “ask” of the instructor during a scheduled class.

The various bot-controlled devices sent these questions—identical in every respect—to the instructors at staggered times during the class.

112. The instructors and tutors also used “Group Control” to command the bot-controlled devices to write five-star reviews for a given course or Instructor. The following reviews of GSX instructor Yao Lujing dated April 7, 2020—posted within seconds of each other—are illustrative:

 请输入 ★★★★★	非常好，学到新的单词，棒棒棒棒棒 词霸天下38000词汇速记全集	Very good, I've learned new words, great great great	2020-04-07 19:16:28
 请输入 ★★★★★	非常好，学到新的语法，棒棒棒棒棒 万法归宗之英语语法速成全集	Very good, I've learned new grammar, great great great	2020-04-07 19:16:13
 手续费 ★★★★★	感觉越听越有进步，学到的单词也很多，但是需要课后的练习巩固。 词霸天下38000词汇速记全集		2020-04-07 19:01:51
 手续费 ★★★★★	老师讲课幽默风趣用的方法很实用，但是希望老师稍微长的慢一点，刚开始。 词霸天下38000词汇速记全集		2020-04-07 19:01:16
 手续费 ★★★★★	老师讲的单词都很实用，讲的都是干货，听一次爽，一直听一直爽。 语法写作速成公开课		2020-04-07 19:00:41
 Ymc ★★★★★	爱听课的我，每天坚持听一节课真的好 极简英语—从零基础到英语能力全面提升	As a person who likes to attend classes, I feel so good to attend a class everyday	2020-04-07 09:26:34
 Ymc ★★★★★	听了这节课来报班学习的，这么多人一起 极简英语第一节回顾	Enrolled after attending this class, so many people together	2020-04-07 09:24:01
 小刘静 ★★★★★	喜欢宇哥的教学风格，易懂，喜欢👍 【极简英语】—从零基础到英语能力全面提升		2020-04-07 09:23:50



113. The first two reviews above purport to be from the same user, are identical linguistically and syntactically, and were posted within 15 seconds of each other. All that distinguishes one from the other is the course for which the “same” user is reviewing the “same” instructor.

114. The third through fifth reviews above also purport to be from the same user, are identical in substance, and were posted within 70 seconds of each other. As with the first two reviews, the third through fifth reviews are distinguishable from each other only with respect to the course for which the “same” user is reviewing the “same” instructor.

115. The sixth and seventh reviews above, like the others, appear to be from the same user, are nearly identical in substance, and were posted within 153 seconds of each other. Like the others, the sixth and seventh reviews are distinguishable from each other only with respect to the course for which the “same” user is reviewing the “same” instructor.

116. The ninth through twelfth reviews above, also purport to be from the same user and are identical in substance. These four reviews were posted within 163 seconds of each other.

As with the other reviews, the eighth through twelfth reviews are distinguishable from each other only with respect to the course for which the “same” user is reviewing the “same” instructor.

117. The phenomenon illustrated above cannot be explained by normal human behavior.

b. Nearly 60% of GSX’s Elementary-Level Courses Are Duplicates and Attended by Bots

118. In all its SEC filings throughout the Class Period, GSX has reported “paid enrollments” for certain “paid” courses, but GSX never disclosed that at least 58% of such “paid” courses are duplicates attended by “bots.” A “duplicate” course is one that is marketed as a specific, grade-level-appropriate course, but actually combines students from among several grade levels into one larger class. For example, a student in Elementary Grade 1 who enrolls in a “Super Spelling” live online course with Instructor X beginning on Date Y actually enrolls in the same course as students in Elementary Grades 2–6 who enroll in the “Super Spelling” courses marketed at their grade level.⁸

119. As of October 10, 2020, GSX offered 88 courses across Elementary Grades 1-6. Of these 88 courses, only 37 (i.e. 42%) were not duplicates.

120. The phenomenon illustrated above cannot be explained by normal human behavior.

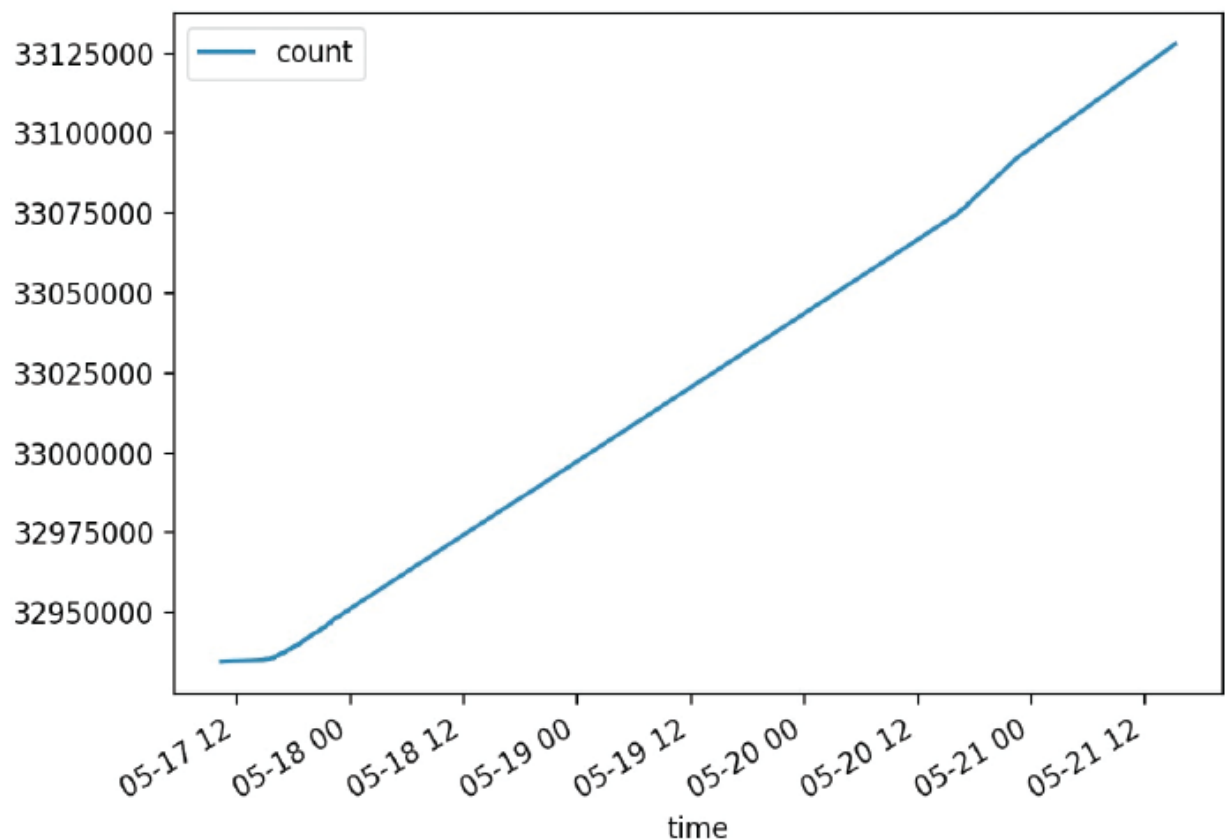
c. Perfectly Linear Enrollment Growth Shows the Majority of GSX’s User Accounts Were Created by Bots

121. Genshuixue is one of two GSX brands through which GSX markets its online K-12 courses. To enroll in a course, a user must first establish an online profile and user account,

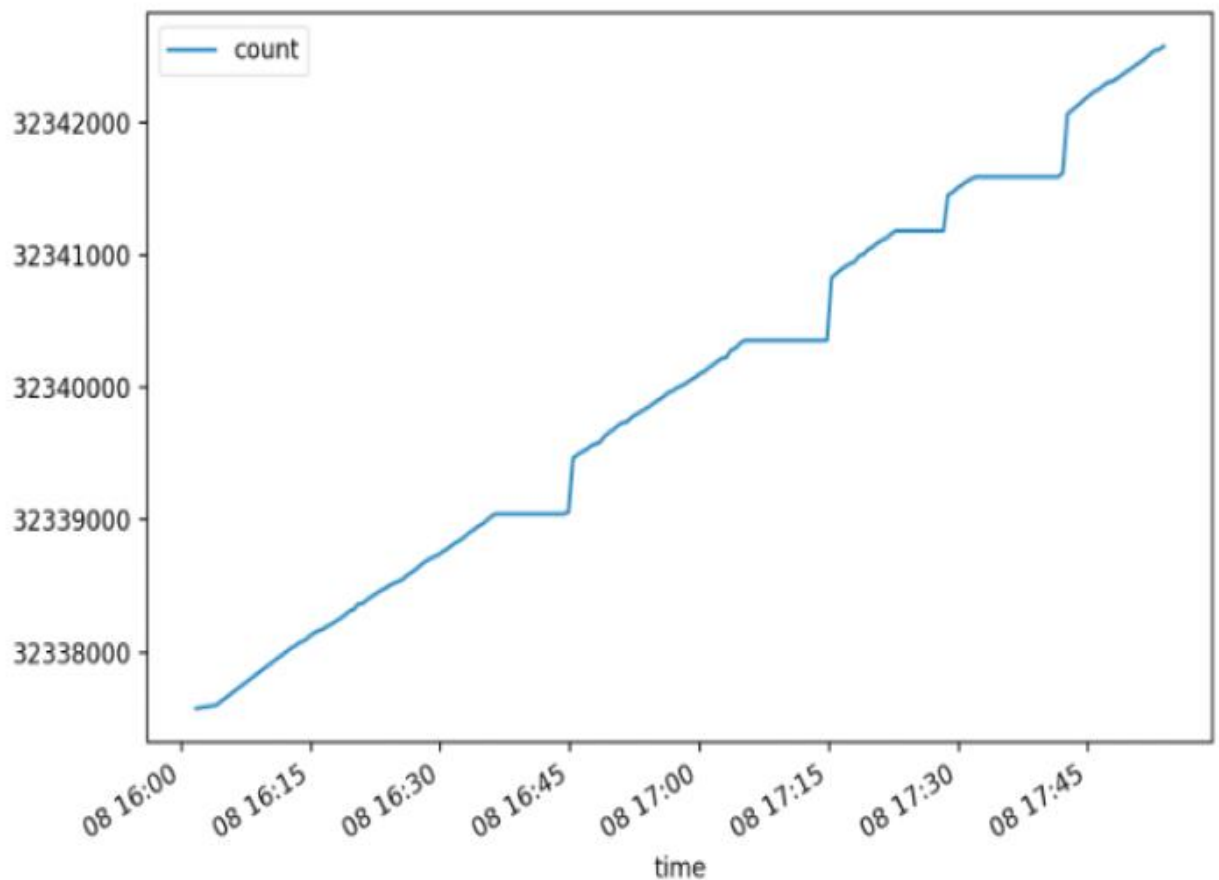
⁸ For a demonstration of this phenomenon, *see* Sylvan Research, *Sam / Super Spelling / Duplicate Classes 1–6 / GSX with audio*, YouTube (Oct. 13, 2020), <https://www.youtube.com/watch?v=1ZVnf8Keww4>.

so that all paid enrollments must be linked to a user account. Although GSX does not report the number of student users across its platforms, it reports “enrollments.” For 2Q2020, GSX reported 1,567,000 paid enrollments.

122. Organic user growth tends to fluctuate over time because several human variables affect market demand for most services. Although specific, time-limited factors, like marketing campaigns, may encourage a burst of enrollments in a short span of time, a linear increase in demand for any service cannot be the result of normal human behavior. Yet, GSX’s data show that the growth in Genshuixue’s user account numbers increased almost perfectly linearly between May 8 and May 21, 2020:⁹



123. Where there were lags in the linear growth pattern of more than 15 seconds, the rate of user account increases accelerated to catch up. For example, on or about May 8, 2020, between 4:00 p.m. and 5:45 p.m., Genshuixue's user data show that GSX added over 4,000 new user accounts, nearly linearly:¹⁰



124. The illustrations in ¶¶ 166–67 demonstrate that GSX's user growth is not the product of organic growth, and can be explained only by the use of skillfully calibrated bots.

d. Attempting to Avoid Detection of its Thousands of Bots, GSX Programs Each Bot with One of Three Distinct “Flavors or “Personalities”

125. Whereas bots permeate each element of GSX’s user-facing business, they must be programmed to imitate real human behavior to avoid detection. Similarly, bot-generated user accounts must have some variation. For example, user accounts must have different usernames, phone numbers, and profile pictures. To this end, GSX has developed, or paid third parties to develop, three different “personalities” for each of the bots on its platforms; user accounts each have the “flavor” of one of these distinct “personalities.”

126. Specifically, “Bot Type 1” user accounts are ascribed a ‘female’ gender, use a default ‘female’ avatar, and are assigned random usernames. All of the usernames are random nouns in Mandarin, not Chinese names:



127. “Bot Type 2” user accounts are all ascribed a ‘female’ gender, use a default ‘female’ avatar, and are assigned usernames that are designed to look like mobile telephone numbers. None of these telephone numbers comports with the Chinese Telephone Code Plan and therefore none is a real phone number:



128. “Bot Type 3” user accounts are all ascribed a ‘female’ gender and a random, low-resolution photographic avatar measuring 132 pixels by 132 pixels. By contrast, the average digital image measures at least 1024 pixels by 1024 pixels. Since GSX’s platform is entirely digital, requires a “smart” mobile device, and is geared toward children and young adults, it is improbable that thousands of user accounts would have low-resolution photographic avatars unless they are bots.

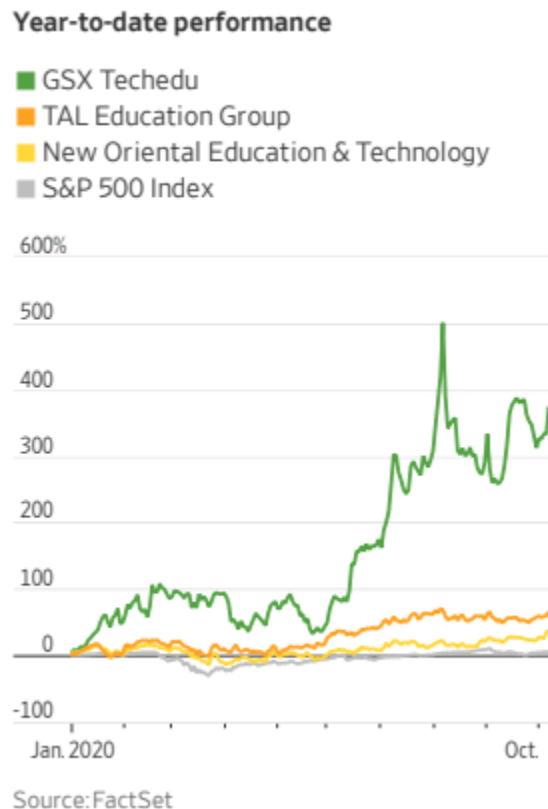
129. This sophisticated scheme demonstrates that GSX’s “core expertise” was not in K-12 online education, as it claimed time and again to investors before the IPO and throughout the Class Period. Instead, the Company’s expertise lies in using sophisticated computer engineering experts to facilitate a sham business that defrauds unwitting parents of schoolchildren in China. To finance and maintain its bot-based “business,” GSX took advantage of U.S. investors. Using the NYSE as its bankroll, Company siphoned massive funds from the U.S. market at the expense of Plaintiffs and all members of the Class.

6. GSX Techedu's Growth Compared to Competitors' Cannot Be Explained by Competitive Advantage or Any Other Legitimate Reason

a. Analysis of Historical Company Growth Shows That GSX Would Be Increasing in Value at A Rate Comparable Only to Google in The Early 2000s at the Onset of Intent Searches

130. GSX's growth and financial performance is too good to be true.

131. While the top three U.S.-listed Chinese education companies all outperformed the broader market in the first three quarters of 2020, GSX's reported performance lapped that of any of its competitors, without any plausible, legitimate explanation.¹¹



¹¹ Jing Yang & Xie Yu, *One of the Year's Worst Short Bets Defies Scathing Reports & and SEC Investigation*, Wall St. J. (Oct. 12, 2020, 5:38 AM), <https://www.wsj.com/articles/one-of-the-years-worst-short-bets-defies-scathing-reports-and-an-sec-investigation-11602495518>.

132. As one market analyst correctly noted, “The stated growth and profitability of this company can only be matched by Google in its early days. This is just not believable.”¹²

133. Indeed, GSX is the only publicly-traded Chinese online education company that consistently reported bottom-line profitability in 2019, and it was the first such company ever to report net profitability.

134. GSX’s growth far outpaces its rivals’ when they were at similar stages of development:

Company	FY reached GSX 2018 revenues	Revenues FY reached GSX 2018 revenues	Revenues next FY	Growth (%)
GSX	2018	RMB 397 mln	RMB 2.1 bln	4,290%
New Oriental	2004	RMB 441 mln	RMB 643 mln	46%
TAL Education	2011	RMB 450 mln	RMB 697 mln	55%

135. GSX’s growth also far outpaces its rivals’ over the same period:

Company	Revenues for the year ended about December 31, 2018	Revenues for the year ended about December 31, 2019	Growth (%)
GSX ¹³	USD 59.2 mln	USD 304 mln	4,290%
New Oriental ¹⁴	USD 2.8bln	USD 3.2 bln	15%
TAL Education ¹⁵	USD 2.6 bln	USD 3.3 bln	28%

136. GSX’s self-reported growth in other periods is similarly implausible. According to the Company, its total valuation increased by 65.55% year-over-year between June 30, 2017

¹² Kenneth Rapoza, *China’s ‘Better Than Tesla’ Stock Is A Scam, Short Sellers Say*, Forbes (Aug. 11, 2020, 8:00 AM) (quoting Andrew Left, Founder, Citron Research), <https://www.forbes.com/sites/kenrapoza/2020/08/11/chinas-better-than-tesla-stock-is-a-scam-short-sellers-say/?sh=17b2c6811e49>; @CitronResearch, Twitter (May 13, 2020, 7:46 AM), <http://www.twitter.com/morisa1007/status/1281956792956788736?s=20>.

¹³ For the years ended December 31, 2018/19.

¹⁴ For the years ended November 31, 2018/19.

¹⁵ For the years ended February 28/29, 2018/19.

and June 30, 2018, by 197.67% *year-over-year* between December 31, 2017 and December 31, 2018, and by 1,502% *year-over-year* between March 31, 2018 and March 31, 2019.¹⁶ All told, the Company claimed that in the 21-month period preceding the IPO, its valuation increased by 2,386.21%.

137. According to the Company, its “net revenues increased by 307.1% to ¥397.3 million (US \$57.8 million) in 2018 from ¥97.6 million in 2017” and “by 432.3% from ¥397.3 million in 2018 to ¥2,144.9 million (US \$303.8 million) in 2019.” The Company claimed that its “gross billings increased by 437.8% to ¥655.1 million (US \$95.3 million) in 2018 from ¥121.8 million in 2017” and by 412.60%, from “¥655,128,000” in 2018 to “¥3,358,152,000” in 2019. GSX claimed that it realized a positive net income for the first time in 2018, of “¥19.7 million (US \$2.9 million) in 2018, compared with a net loss of ¥87.0 million in 2017,” a 122.64% increase. The Company reported that its “net income increased from ¥19.7 million in 2018 to ¥226.6 million (US \$32.5 million) in 2019,” a 1050.25% increase.

138. Of critical import to investors, GSX represented that its online K-12 business “contributed over 73% of [its] total revenues in 2018 [sic] and that “total enrollments” in such courses¹⁷ increased from 79,632 in 2017 to 767,102 in 2018,” an increase of 863.31%. Simultaneously, GSX claimed that “total paid enrollments” across all of its business lines “increased from 65,092 in 2017 to 552,294 in 2018,” an increase of 748.48%. Later, GSX represented that its online K-12 business contributed to 80.7% of its total revenues in 2019 and

¹⁶ The Company represented that each of its shares was worth ¥2.90 on June 30, 2017; ¥3.70 on October 31, 2017; ¥4.30 on December 31, 2017; ¥4.50 on March 31, 2018; ¥4.80 on June 30, 2018; ¥12.60 on September 30, 2018; ¥12.70 on December 31, 2018; and ¥72.10 on March 31, 2019.

¹⁷ As discussed in more detail below, GSX purposely conflated “total *paid* enrollments” for K–12 courses with “total enrollments” for such courses in its filings throughout the Class Period.

that “K-12 paid course enrollments increased by 374% from 419.9 thousand in 2018 to 1,957.6 thousand in 2019,” and that “*total enrollments* increased” from “767,102 in 2018 . . . to 2,742,545 in 2019.” The Company claimed that “[i]n 2019, 89.5% of [its] paid course enrollments were from [the] K-12 courses, compared to 74.8% in 2018 and 86.6% in 2017.” GSX also represented that it employed 163 instructors and 352 tutors as of December 31, 2018, while it employed 176 full-time instructors, “56 full-time on-line exclusively contracted instructors,” and “3,736 full-time tutors” as of December 31, 2019.

139. GSX has no legitimate competitive advantage that would explain this growth.

b. GSX Does Not Have a Superior Product

140. According to a UBS survey, GSX offers an inferior product at higher prices. Analysts employed by UBS conducted a survey of 2,100 respondents who have children in primary school, junior high, or high school, in China. The survey was conducted between November 22 to December 6, 2019. They included survey results in an analyst report they published on January 15, 2020. UBS reported that parents were less satisfied with either of GSX’s products than with peer average (Genshuixue: 4.07; Gaotu: 4.29; Peers’ average: 4.34) and that the brands were less prominent (Parents’ awareness—Genshuixue: 10.3%; Gaotu: 20.5%; Peers’ average 39.3%). These are comparisons to the average product, not the leading products. Yet despite offering low-quality offerings from lesser-known brands, GSX claimed to charge premium prices (hourly average sale price—Genshuixue, 80 RMB; Gaotu, RMB 56; Peers’ average: RMB 40). Thus, GSX offers lesser-known, inferior products at premium prices, but asserts that its market share is exploding.

c. GSX Does Not Have Superior Teachers

141. GSX has routinely represented that one of its central competitive advantages is its superior teaching staff. For example, in its May 2019 F-1/A dated May 28, 2019, the Company

represented that it “relentlessly pursue[s] the highest quality in [its] course offerings” and claimed that its “education[al] excellence is backed by [its] high-quality teachers and in-house curriculum development expertise.” Likewise, during an August 22, 2019 earnings call teleconference Defendant Shen assured the investing public that GSX has “a really high bar to recruit instructors,” claiming that “less than 2 [percent of interviewees] can pass [the Company’s] interviews.” According to Defendant Chen, the Company “focus[es] on hiring only the very best teachers in China.”

142. GSX’s representations that its teaching staff are “well trained” or that the bar to becoming an instructor is high are false, and so cannot explain the Company’s implausible growth compared to its peers. From before its IPO and continuing throughout the Class Period, GSX routinely hired as tutors newly-minted university graduates, without a formal application process, and without requiring any proof that such graduates had any teaching credentials whatsoever.

143. CW-7, an Account Manager who directly recruited GSX’s instructors, was directed to make hiring decisions based more upon a candidate’s charisma and physical appearance and less on his or her academic qualifications and teaching background. As CW-6 explained, beginning as early as August 2016, GSX’s aim was “to hire college students cheaply” as instructors or tutors and to be “casual” about candidates’ experience. As CW-7 explains, “academic degrees or work experience” were “not the most important” qualifications for hire.

144. GSX’s hiring process was not selective. At all relevant times, GSX’s Genshuixue brand maintained an online “Teacher Application Portal”¹⁸ through which any person with a WeChat account could sign up to be paired with students. As depicted below, it appears that any person with a WeChat account can register to be a teacher after completing “four simple steps,” which are: (1) “Fill in the complete personal information;” (2) “Set up at least one course and fill in the class method and price;” (3) “Set your class time;” and (4) “Submit certification information (ID certification is required).” According to the website, “[a]fter the 4 steps are set up, wait for the system to approve, and you can start classes on the platform!”¹⁹

145. This process shows that GSX’s teacher recruiting is not at all rigorous. GSX’s record-breaking growth cannot be attributed to having “superior” teachers.

146. Furthermore, GSX actually violates Chinese law by recruiting and ultimately hiring as instructors and tutors individuals without the requisite educational and professional credentials, GSX’s online education business is in violation of Chinese law. As in the United States, the licensure and credentialing of education professionals is highly regulated in China. On August 6, 2018, the Chinese State Council on for the Ministry of Education formally promulgated its *Opinion on Regulating After-School Training Institutions*, known in China as “Opinion 80.” Under Chinese law, such a decree is binding on all persons unless and until it is amended or revoked by the central government.

147. Opinion 80 provides, in part:

¹⁸ See Xiànzài Rùzhù Gēn Shéi Xué (现在入驻跟谁学), Gēn Shéi Xué: Běijīng Bǎi Jiā Hùlián Kējì Yǒuxiàn Gōngsī (北京百家互联科技有限公司), <https://www.genshuixue.com/static/teacher>.

¹⁹ *Id.*

The personnel employed for training must abide by the Constitution and laws, love education, have good ideological morality and corresponding training capabilities; *teachers engaged in training in Chinese, mathematics, English and physics, chemistry, biology and other subjects should have the corresponding teacher qualifications.* Training institutions shall sign employment contracts, labor contracts or labor service agreements with the personnel they employ in accordance with the law. The recruitment of foreign personnel must comply with relevant national regulations. In terms of management conditions, off-campus training institutions must adhere to and strengthen the leadership of the party, so that the party's building is planned, the party's organization is set up, and the party's work is carried out simultaneously to ensure the correct direction of running the school. There must be a standardized charter and corresponding management system, clarifying the purpose of training, business scope, decision-making mechanism, capital management, guarantee conditions and service commitments.

148. As CW-6, and CW-7 explain, GSX's tutors and instructors do not have "teacher qualifications" to teach "*Chinese, mathematics, English and physics, chemistry, biology and other subjects.*" CW-6, for example, taught high-school Chemistry at GSX and had no teaching qualifications at all, and CW-6's lack of qualifications was typical of GSX instructors and tutors. Indeed, as of April 19, 2019, only 12% of GSX's instructors and tutors had the requisite credentials to provide online educational services to students. They spend more than sixty percent of their time on advertising and promotional efforts, receive no formal ongoing training in educational best practices, and work without rest to make sales.

d. Data Show GSX Has Fewer Teachers than Competitors

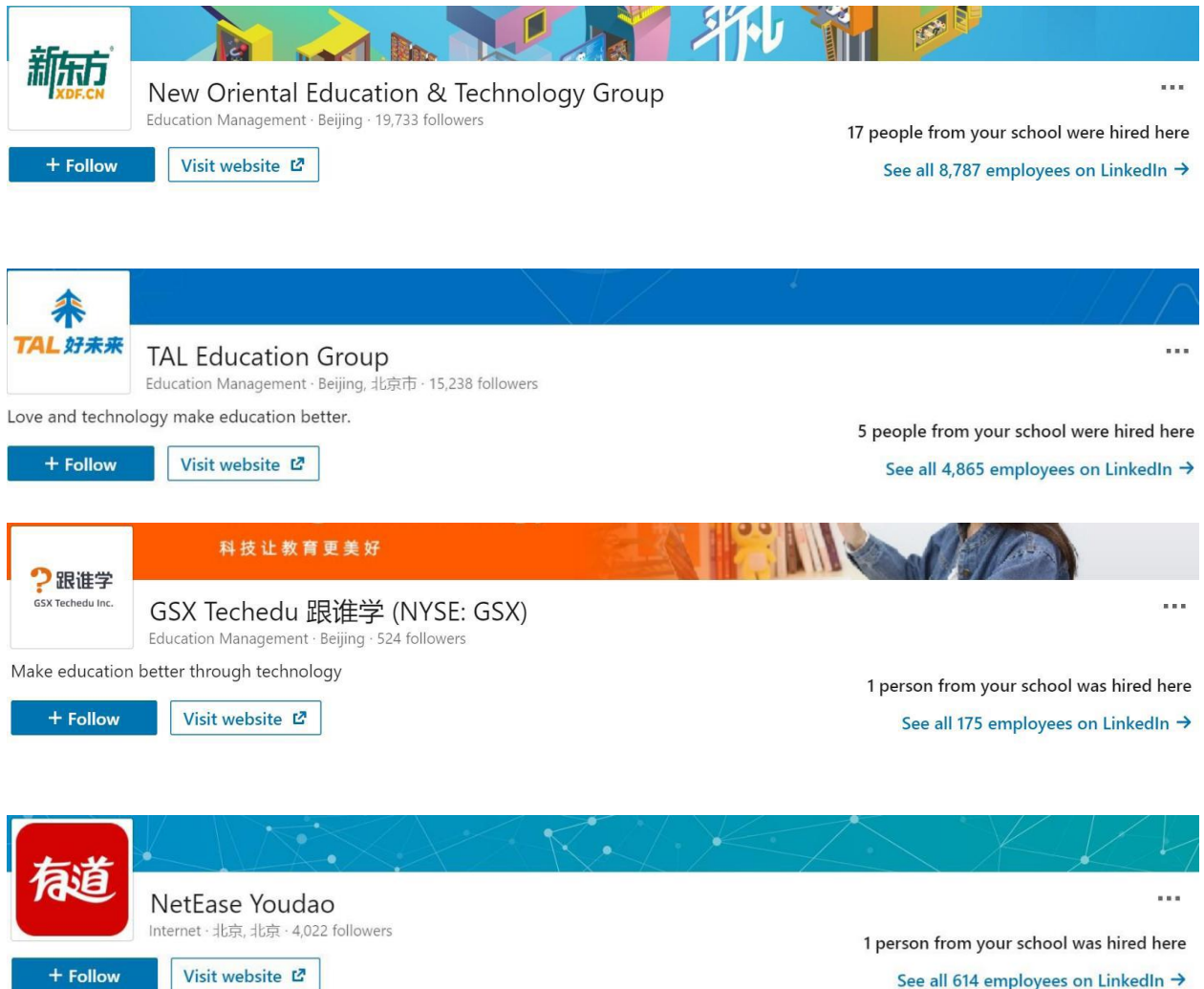
149. GSX's implausible growth likewise cannot be explained by having more teachers than its competitors—throughout the Class Period, GSX employed fewer teachers than its competitors.

150. Data from LinkedIn, the most popular global social media app for professional connections, offer an objective, company-independent approximation of the number of teachers GSX actually employs. According to LinkedIn, as of August 8, 2020, New Oriental had 8,787 employee profiles, TAL had 5,555 employee profiles, while GSX's employee profiles, across all

brands, numbered only 451. As of August 8, 2020, New Oriental claimed to have “84,500 employees including over 42,400 highly qualified teachers.” As of May 26, 2020, TAL claimed to employ “a total of 34,733 people.” GSX, for its part, claimed on September 2, 2020 that it employs 10,000 tutors. Accepting the companies’ public statements as true, coupled with investigative findings, 10.40% of New Oriental’s employees have a LinkedIn profile, 15.99% of TAL’s employees have a LinkedIn profile, but only 4.51% of GSX’s “employees” have a LinkedIn profile. Online businesses working in similar markets, like New Oriental, TAL, and GSX, should have similar percentages of their employees on the same professional networking platforms. That GSX has a far smaller percentage of its employees on LinkedIn suggests that GSX has exaggerated its teachings staff.

151. The number of LinkedIn followers provides another objective, company-independent proxy for the actual size of its educational force. As of August 8, 2020, GSX, which claims to be the third-largest online education provider in China, had the fewest followers on LinkedIn among its competitors, both large and small. In fact, GSX had 29 times fewer followers than TAL and 37 times fewer followers than New Oriental:













152. Expanding the LinkedIn search to include GSX’s “related business” and sorting the data to capture educational employees irrespective of their precise job titles, only 67 matches appear, of whom 27 are tutors.

153. By contrast a similar search on LinkedIn for TAL’s educational employees, returns over 1,000 matches.

154. Again, running a similar search on LinkedIn across New Oriental’s educational employees, there are over 4,500 matches.

155. Of the 27 tutors who have a presence on LinkedIn, none appear to have the requisite teaching credentials, although most have experience in sales. A sample of five such profiles follows:

 <p>Liu Meng 3rd ✓ Saved</p> <p>Tutor</p> <p>take my time. step by step</p> <p>📍 Wuhan, Hubei, China 👤 86 connections</p> <p>Current  Who does the tutor at GSX Techedu learn from (NYSE: GSX) • 4 months ago</p> <p>Previous  Operation Trainee at Guangdong Yida Textile Co., Ltd. • 2 yrs 7 mos</p> <p>Education  Wuhan Textile University • 2013–2017</p>	<p>Tutor A</p> <p>Prior job: Operations Trainee in Textiles</p> <p>Education: Wuhan Textile University</p> <p>World Ranking: 2566</p> <p>China Ranking: 308</p> <p>Teaching experience: 0</p>
 <p>Feng Liang UNLOCKED</p> <p>Student at Zhengzhou University</p> <p>In the process of starting a business, mainly doing online sales of tea and electronic products</p> <p>📍 Zhengzhou, Henan, China 👤 17 connections</p> <p>Current  Who does the tutor at GSX Techedu learn from (NYSE: GSX) • 4 mos</p> <p>Previous  Shop operation at self-employed/freelance • 3 yrs 3 mos</p> <p>Education  Zhengzhou University • 2016–2020</p>	<p>Tutor B</p> <p>Prior job: Self-employed Store Operations</p> <p>Education: Zhengzhou University</p> <p>World Ranking: 588</p> <p>China Ranking: 51</p> <p>Teaching experience: 0</p>

Tutor C

Prior job: Pump Sales Management
 Education: Taiyuan UST
 World Ranking: 1067
 China Ranking: 117
 Teaching experience: 0



Zhang Mengru 3rd ✓ Saved

Who does GSX Techedu learn from (NYSE: GSX)-Training Camp Tutor

Beijing, China 5 connections

Current

Training Camp Tutor at GSX Techedu Who to Learn from (NYSE: GSX) • 5 mos

Previous

Sales Guan Peisheng at Nanfang Pump Co., Ltd. • 7 mos

Education

Taiyuan University of Science and Technology

Tutor D

Concurrent job: Senior Sales
 Education: NA
 Teaching experience: 0



Sarah Zhang 3rd

GSX Techedu (NYSE: GSX)-Senior Sales

Zhengzhou, Henan, China 20 connections

Current

Senior Sales at GSX Techedu GSX (NYSE: GSX) • 10 mos

Mathematics tutor at GSX Techedu Learn with whom (NYSE: GSX) • 10 mos

Tutor E

Prior job: Assistant to GM & waiter
 Education: Dalian UY City College
 World Ranking: 346
 China Ranking: 22
 Teaching experience: 0



Dong Wenwu 3rd

Beijing Baijia Internet Technology Co., Ltd.-Tutor

Only education can make a country strong

Dalian, Liaoning, China 26 connections

Current

Tutor at Beijing Baijia Internet Technology Co., Ltd. • 1 yr

Previous

Assistant General Manager at Jinan Baojiakang Biotechnology Co., Ltd. • 5 mos

Internship waiter at Yoshinoya • 1 yr 5 mos

Education

Dalian University of Technology City College • 2015–2019

+ 1 more

156. Some GSX tutors maintain profiles on MaiMai, another professional networking site. As with their colleagues on LinkedIn, the majority of the self-reported work histories of these tutors show backgrounds in sales, not in education.

157. As the above makes clear, despite its year-long representations that it was recruiting additional instructors and tutors, GSX has far fewer teaching employees than comparable education companies in China.

7. Data Show that GSX Techedu's Education Services Are Not Used or Recognized in Line with the Company's Representations about Its User Base and Revenue

a. GSX Is Absent from Reports of Major Players in the Education Industry in China

158. The online education learning marketplace is highly regulated in China. “Opinion 80,” discussed above in ¶¶ 146-47, also establishes certain oversight procedures and standards applicable to all Chinese online education businesses, including GSX. Among other things, Opinion 80 provides that online educational institutions are to be “a supplement to in-person education.” The Chinese government was concerned that many providers had become too “exam-oriented” and “financially burdensome” to families, and thus detrimental to healthy educational development among schoolchildren. Thus, Opinion 80 established an “annual inspection and annual report system” whereby the government surveys students from each of the approved online education providers, and then publishes the results online.

159. On August 10, 2019, the Chinese Ministry of Education formally promulgated its *Opinion on the Orderly and Health Development of Internet Applications*, known in China as “Opinion 55,” which provides, among other things, that qualified “providers of educational mobile applications shall consciously accept social supervision, set up convenient channels for complaints and reports, and handle complaints in a timely manner.”

160. In accordance with those provisions, China’s State Administration for Market Regulation (the “SAMR”), a PRC government agency, administers industry market surveys to businesses and consumers at least once per year, and publishes the results of those surveys in the state-owned media outlets China Consumer News and the Guangming Daily News.

161. On March 27, 2020, the SAMR, through China Consumer News, reported the results of its inaugural “Online Education Consumer Experience Survey.” The survey, which polled data from March 3 through March 8, 2020, provided a method whereby the Chinese government could “socially supervise” the “consumer experience” and consumers’ “evaluation[s]” of e-learning, as required by Opinions 80 and 55. The SAMR sent the survey to Xueersi, Tencent Classroom, Homework Gang, China University, Yuandaodao, and New Oriental Education & Technology Group Inc. Yet GSX, which has purported to be the “third-largest online K-12 large-class after-school tutoring service provider in China” from 2017 through the present, was too small to be included in the SAMR survey.

b. Survey Data Show that GSX Is Not Widely Used

162. Anxious to secure the best possible education for their children, Chinese parents pay close attention to the education technology industry in which GSX operates. Chinese-language publications based in China cater to these parents by providing information on, and rankings of, the various providers. These publications rarely even mention GSX, and this lack of mention shows that GSX is a bit player in China:

(a) The SAMR-backed China Consumer News recently conducted at least two surveys of users of online education asking about the effectiveness of remote learning during the

pandemic.²⁰ The surveys both included K-12 respondents. These surveys asked about seven and twelve platforms, respectively. Neither GSX nor Gaotu were included in either survey's list of platforms.

(b) An April 2020 research report published in the Central Committee-sponsored *Guangming Daily* did not include GSX in a list of 39 online education providers.²¹

(c) GSX is not included in 2018, 2019 and 2020 reports on Chinese education technology providers published by iResearch, the leading provider of online audience measurement for China.

163. Private surveys further show that GSX is not widely recognized in China, and certainly not recognized in line with what one would expect were GSX to have the massive student base it claims to have. As it reported on May 25, 2020, in each of March and May 2020, well-regarded China-focused equity research shop JL Warren Capital commissioned a survey of parents who had used K-12 education technology for their children in the past 6 months. The surveys had large sample sizes (March: 2,500; May: 2,222). Though GSX claims to be the third-largest provider of K-12 afterschool education in China, the surveys showed that GSX's Gaotu platform had about 3% market penetration—well behind TAL Education (25%), New Oriental Education (20%), behind Zuoyebang (18.8%), YuanFudao (17.3%), Zhangmen 1-on-1 (6.3%),

²⁰ Zhōngguó Xiāofèi Zhě Bào (中国消费者报), *Wǒmen Shōujīle Xué Ér Sī, Zuòyè Bāng, Yuán Fúdǎo De Tǐyàn Diàochá Wènjuàn, Jiéguǒ...*

(我们收集了学而思、作业帮、猿辅导的体验调查问卷, 结果...), *Shànghāi Dōngfāng Bào Yè Yǒuxiàn Gōngsī* (上海东方报业有限公司) (Mar. 27, 2020, 6:00 PM), https://www.thepaper.cn/newsDetail_forward_6721156.

²¹ Běi Shī Dà Xīn Méitǐ Chuánbō Yánjiū Zhōngxīn (北师大新媒体传播研究中心), *Xīnguān Yìqíng Qíjiān Zhōng Xiǎoxué Zàixiàn Jiàoyù Hùdòng Yán Jiù Bàogào* (新冠疫情期间中小学在线教育互动研究报告), *Guānmíng Wēi Jiàoyù* (光明微教育) (Apr. 2, 2020, 10:36 AM), https://edu.gmw.cn/2020-04/02/content_33708443.htm.

and even behind VIPKid (5.9%), supposedly a much smaller competitor.²² JL Warren Capital's survey also reported that 70% of parents reported there were fewer than 600 students in their children's Gaotu class—well below the average of 2,000 reported by Defendants.

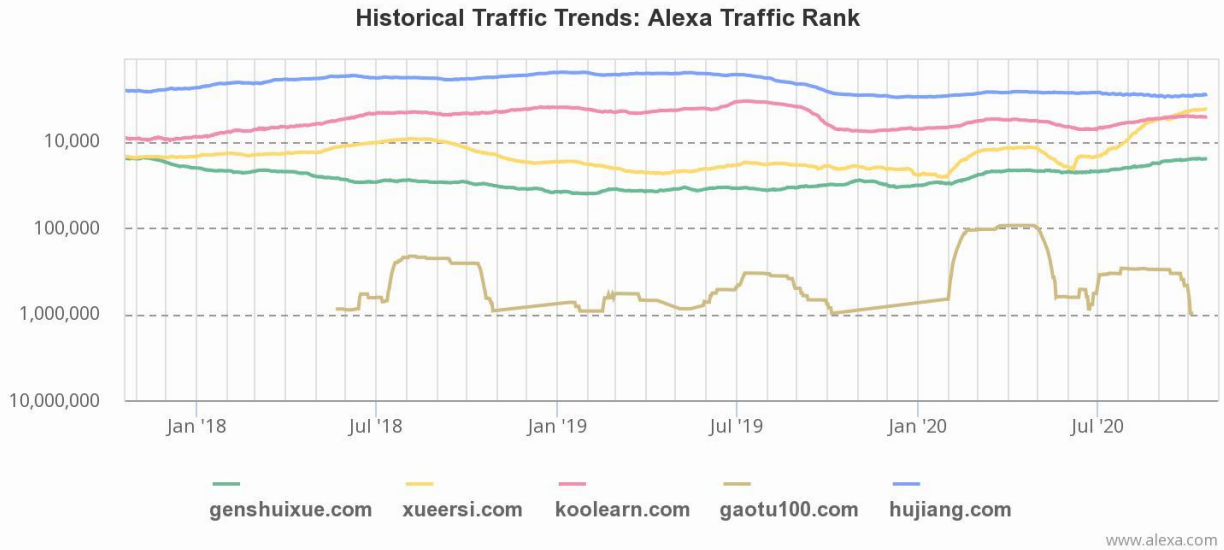
164. JL Warren Capital conducted another survey in December 2020. The survey again found that GSX's market penetration was far below its peers. Of the 300 respondents, 32.7% reported they had purchased TAL Education's online courses in the past 6 months, 14.4% had purchased New Oriental's—and only 3.3% had purchased GSX's

c. Web Analytics Show that GSX Is Not Widely Used

165. Because it is an online-only educational platform, web traffic metrics should overstate GSX's market penetration compared to peers who also employ in-person or online-to-offline business models. Yet web analytics reports *also* show that GSX is a bit player.

166. Alexa, the gold standard in the industry, ranks websites by the traffic they receive. As of January 2020, the platforms of competitors New Oriental and Huijiang both ranked in the top 10,000 websites, but GSX's platform ranked around 80,000th. Notably, during the period in which Defendants claim GSX grew exponentially, its platform's Alexa ranking actually *declined*.

²² All figures from the May 2020 survey.



167. Similarly, Rank2traffic, which estimates the number of visitors to particular websites, reports that the traffic to GSX’s competitors’ relevant domains dwarfed that to GSX’s:

	2018	2019
TAL	216.2 million	158.2 million
New Oriental	189.5 million	120.0 million
VIPKid	53.3 million	40.1 million
GSX	<i>15.5 million</i>	<i>10.3 million</i>

Thus, GSX draws little traffic to its websites, undercutting Defendants’ claim that it is a leading provider.

168. Nor did GSX draw many mobile users. Even Defendants admitted on an April 9, 2020 call responding to the Grizzly article that “We acknowledge that the industry recognizes Qimai’s experience in app store ranking and ASO monitoring.” Yet as Grizzly reported, according to Qimai, GSX’s daily downloads were miniscule—only a third of TAL Education’s.

169. According to a search that analyst firm Sylvan Research conducted on August 7-9 and reported on August 9, 2020, only 451 of GSX’s purported *at least* 10,000 employees, or 4.5% have pages on LinkedIn—compared to 11% and 16% for competitors TAL Education and New Oriental, and suggesting that Defendants have overstated the number of GSX employees.

170. On April 9, 2020, Defendants held a conference call to address allegations that GSX had overstated the extent of its operations. During the call, Defendants encouraged investors to rely on QuestMobile data, which, Defendants claimed, showed traffic in line with GSX's claimed market share:

Last major point is the download data of our apps. According to QuestMobile, one of the most frequently used third-party data providers shows the total monthly new users for GSX and Gaotu Ketang apps were 2.21 million for the second half in 2019, ranking us the third among education peers.

171. In fact, on February 12, 2020, QuestMobile published a report listing the top 5 applications ranked by daily active users from January 14 through February 4, 2020. GSX and Gaotu were not on the list.

172. App download numbers also show that GSX is unpopular:

Android App Store Ranking	Company	Category	Jan 20	Feb 20	Mar 20	Apr 20	May 20	Jun 20	Jul 20	Aug 20	Sep 20	Valuation USD Bn
Tencent Classroom	Tencent (0700 HK)	Adult Vocational Training	65	3	1	1	4	18	25		15	3.3
Tencent Penguin Tutoring		K12 Online Class	148			70	52	30		170	57	
Youdao Online	Youdao, Inc (NASDAQ: DAO)	K12/Adult Vocational Class	56	37	39	33	42	55	11	19	42	
University MOOC		Higher Education Certifications	33	7	9	7	25	62		40	28	
YFD Math	Yuanfudao (9th round in Aug 2020)	Homework Assistance (K1 to K6)	14	26	18	9	16	21	3	18	11	10
YFD Zebra		Pre K	53	57	46	14	15	16	5	6	10	
YFD Live Class		Pre K to K12	31	8	37	12	30	22	10	14	21	
TAL Online	TAL Education Group (NYSE: TAL)	K12 Large Class	10	4	8	10	9	24	2	7	22	13
TAL Peliyou		Offline Class	69	61	86	78	83	38		37	84	
ZYB (Homework Assistant)	ZYB (E round in Jun 2020)	Homework Assistant	1	2	3		1	1		1	1	0.5
ZYB Live Class		K12 Large Class	45	5	23	16	34	26		21	37	
VIP Kid	Beijing Dami Technology Company (9th round in Sept 2019)	English Language	62	69	58	35	70	97		41	83	
S1 TALK		English Language (for 4-15 yrs old)	87	110	109	68	85	98	81		144	0.1
Liulihua		English Language	179	129	99	103	183		100	27	65	
Classin	IT outsourcing co. used by Koolearn, Youdao etc	Software Solution	27	22	24	15	24	35		49	119	24
Koolearn		K12 Online Class	93	33	47	182	187	178	98	130		
New Oriental		K12 and adult	160	156	189			177		55	77	
GSX	GSX Techedu Inc. (NYSE: GSX)	K12, Adult Large Class	98	82	70	53	87	95		38	79	
Gaotu		K12 Large Class	52	36	80	46	56	52	18	31	68	

APP ANNIE	Company	Category	Jan 20	Feb 20	Mar 20	Apr 20	May 20	Jun 20	Jul 20	Aug 20	Sep 20
Tencent Classroom	Tencent (0700 HK)	Adult Vocational Training	71	1	1	4	7	19	20	5	29
Tencent Penguin Tutoring		K12 Online Class							20	5	8
Youdao Online	Youdao, Inc (NASDAQ: DAO)	K12/Adult Vocational Class	69	47	62	67	56	47	26	35	65
University MOOC		Higher Education Certifications	38	4	20	35	31	46	28	49	15
YFD Math	Yuanfudao (9th round in Aug 2020)	Homework Assistance (K1 to K6)							19	39	12
YFD Live Class		Pre K to K12	2	46	29	44	20	12	4	22	31
YFD Zebra		Pre K							5	7	13
TAL Online	TAL Education Group (NYSE: TAL)	K12 Large Class	3	18	12	10	14	10	7	8	58
TAL Peliyou		Offline Class	84	94				56	53	66	
ZYB (Homework Assistant)	ZYB (E round in Jun 2020)	Homework Assistant	5	5	3	3	4	4	3	4	4
ZYB Live Class		K12 Large Class	14	14	58	51	33	20	17	32	76
VIP Kid	Beijing Dami Technology Company (9th round in Sept 2019)	English Language	81	62	25	59	42	37	28	52	93
S1 TALK		English Language (for 4-15 yrs old)									
Liulihua		English Language	9	6	7	5	10	18	10	11	21
Classin	IT outsourcing co. used by Koolearn, Youdao etc	Software Solution							63		
Koolearn		K12 Online Class	84	10							
New Oriental		K12 and adult							49		
Gaotu	GSX Techedu Inc. (NYSE: GSX)	K12 Large Class	98			99	84	40	39	55	
GSX		K12, Adult Large Class		81	91			96	48	67	

173. Thus, survey data and web analytics both suggest that GSX overstated its revenue and market share.

8. GSX Overstated the Number of Teachers It Employed

174. GSX reported that it had only 232 teachers as of December 31, 2019, rising to only 392 as of December 31, 2020. Yet a large number of the teachers GSX claims to employ do not exist.

175. Teachers in China each have a 17-digit certification code. The eleventh digit is the teacher's gender. For male teachers, the number is 1. For female teachers, the number is 2.

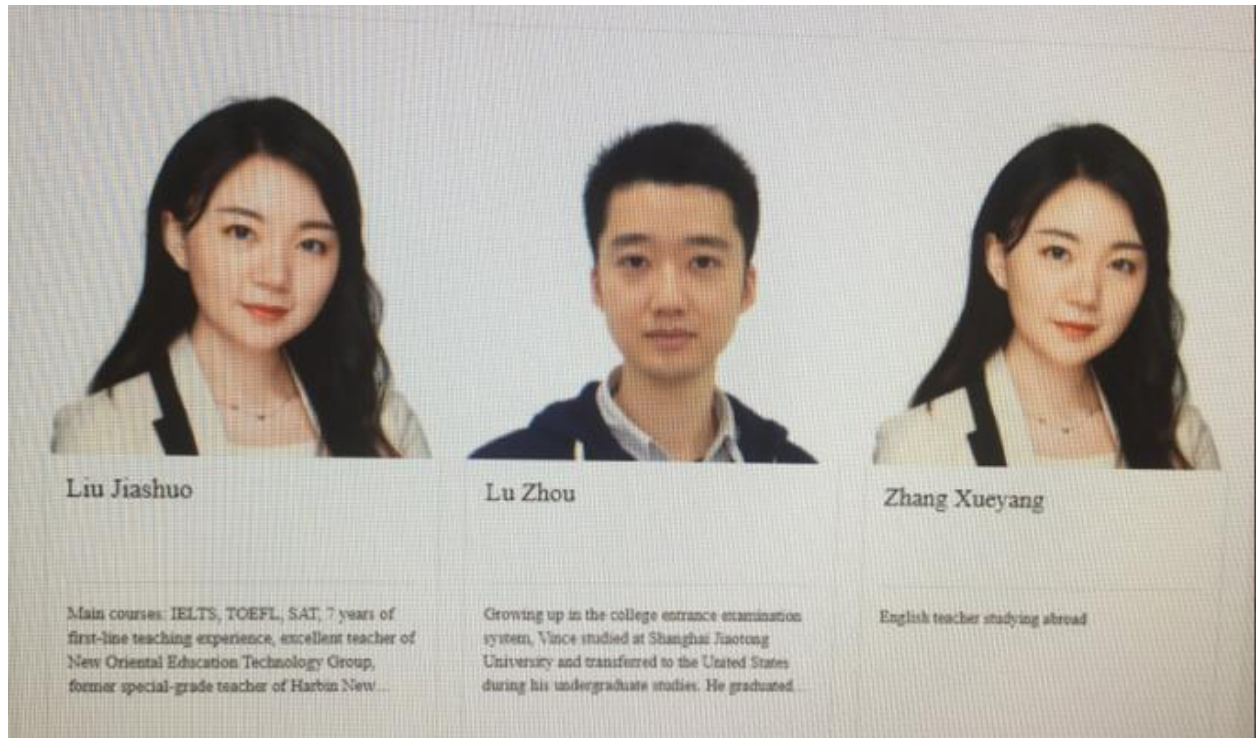
176. GSX's subsidiaries post their teachers' pictures and information, including certification code, on their websites. The tenth digit is the teacher's qualification type code. Only teachers with a teacher qualification code of 2 (elementary school), 3 (junior middle school) and 4 (high school) are eligible to teach at GSX.

177. On March 1, 2021, the market researcher Deloitte Watch published a report online on GSX. The analyst relied on the teacher certification numbers GSX's subsidiaries post on their own website. The researcher identified at least 12 teachers who had the wrong gender code. The researcher also identified two pairs of teachers who had the same certification number. These two errors in certification numbers alone show that more than 3% of GSX's reported teachers are fabricated.

178. In truth, GSX fabricated far more teachers. While GSX reported that it had 232 teachers as of December 31, 2019, a February 23, 2021 21st Century Business Herald article, citing Chinese government statistics, reported that there were only 128 licensed GSX teachers as of the beginning of 2020. [https://mp.weixin.qq.com/s/8_qWf_7dgMjjhkIyJvYprg]. Similarly, while GSX reported 392 teachers as of December 31, 2020, government records showed only 182 as of the beginning of 2021. Thus, GSX overstated its number of teachers by over 215%. The excess were fake.

179. Importantly, when caught, GSX removed teacher profiles. On April 11, the researcher published a follow-up report showing that GSX had removed the profiles of 7 of the teachers identified in the March 2021 report and changed the ID numbers of 3.

180. In a February 10, 2021 report, the same analyst found two teachers on GSX's website with the same picture:



181. Within a day, GSX deleted both Liu and Zhang's profiles.

9. GSX Recognized Money Paid to Brushers to Purchase Enrollments as Marketing and Sales Expenses, Recognized the Enrollment Fees as Revenue, and So Concealed that the Company's Revenues Were Mostly Fake

182. Third-party brushers paid real money for the classes they purchased. The money the brushers then paid GSX to purchase classes was recognized as revenue. But the money for the transaction originated with GSX. Thus, GSX's books and records recorded a corresponding expense when it paid the money to the brushers. These sales were so-called round-trip

transactions without any economic substance. In addition to boosting gross revenues, the round-trip transaction provided a paper trail explaining why GSX's billions of dollars in revenues did not generate billions of dollars in profits. The accounting trick was also necessary because brushing is illegal in China.

183. As explained above, *supra* Section IV(B)(2), confidential witnesses have explained as much: how GSX paid third-party brushers, among other things, to purchase courses with GSX's money that GSX then recognized as revenue, and how GSX accounted for these expenses as marketing expenses.

184. According to CW-2, third party brushing companies "are part of a well-established industry." Some companies provide user registration information. Others specialize in obtaining and providing cell phone numbers for registrations. Still others specialize in attending classes. For example, Xiao U Guan Jia specializes in providing student information and attending classes. GSX invested in certain brushing companies, including Youlian Huanqiu. Moreover, some companies specialize in the financial aspect of the fraud. They handle payments and accounts so the customer can record the order as legitimate income and expenses. GSX retained both Xiao U Guan Jia and Youlian Huanqiu. According to CW-2, both companies would, among other things, make fake payments using GSX's own money. GSX works with many other companies that offer similar services.

185. CW-2 also has knowledge of GSX's brushing schemes. First, as explained further by CW-3, GSX contracts with third-party brushing firms to brush its enrollment figures. In this scheme, CW-2 explained that she "would sign a contract with [the third-party brushing company], I would put RMB1,000,000 into ads, and [the third-party brushing company] would promise me, for example, that 2%, that [the third-party brushing company] can keep

RMB20,000” as “commission.” (Depending on the number of enrollments a given third-party brusher could fabricate, the commissions ranged between two and five percent.) The full RMB 1,000,000 was recorded as a marketing expense. In this scenario, according to CW-2, the third-party brushing company was required to use the remaining RMB980,000 to purchase GSX’s class with “virtual cell numbers or WeChat account numbers.” GSX reported these enrollments as “revenues” and reported the commissions as sales and marketing expenses. As CW-2 explained, the scheme “just takes the 1,000,000 RMB and round trips it.” Asked whether “basically, they are using the advertising expense item to pay these partners”, CW-2 responded “right.”

186. CW-2 described how GSX and third-party companies could use group control or similar products to purchase classes. Group control could be set so that, “[f]or example, each ten minutes make purchases for this many students, then wait so many seconds, then go and buy again.”

187. CW-2 and CW-3 are hardly alone. On April 25, 2020, JL Warren Capital reported on a call it held with a professional brusher who claimed to do brushing work for GSX.

188. JL Warren quoted the brusher as saying:

GSX sent us a detailed brushing plan including our KPIs [Key Performance Indicators] in advance. Each teacher has a head count target. The company decides the number of “enrollments” each teacher gets in their classes. Company believes that brushing is an effective online marketing tool which generates higher ROI than traditional online advertisement.

189. Then, in an April 30, 2020 report, Citron disclosed additional comments from brushers:

Q: How is your fee?

A: The actual cost of our service is not high at all. For a class costing several thousand (RMB), we would only take about 50 RMB in commission. GSX would give us the money for the class and expense it as part of their marketing spend.

We would pay for the class with the money they have given to us minus our commission. Effectively, the money would go back to their account as revenue minus our commission.

190.

191. That GSX recognized money paid to third-party brushers to use to pay for student enrollments as marketing expenses explains GSX's otherwise inexplicably massive expenditures on marketing (selling) expenses during the Class Period. As its revenues began to grow, GSX recognized enormous marketing expenses. These expenses were comparable to those of its much larger than its peers and amounted to a far greater percentage of revenues.

	<i>In USD</i>	2019	1H 2020	2H 2020	1H 2021
GSX	Revenue	304 million	417 million	674 million	646 million
	Selling expenses	150 million	278 million	613 million	608 million
	<i>Selling /revenues</i>	<i>48.5%</i>	<i>66.6%</i>	<i>91.0%</i>	<i>94.1%</i>
TAL Education ²³	Revenue	3,228 million	1,768 million	2,222 million	2,748 million
	Selling expenses	746 million	562 million	684 million	674 million
	<i>Selling /revenues</i>	<i>23.1%</i>	<i>26.1%</i>	<i>30.8%</i>	<i>24.5%</i>
New Oriental	Revenue	3,497 million	1,722 million	1,874 million	2,402 million
	Selling expenses	402 million	236 million	251 million	350 million
	<i>Selling /revenues</i>	<i>11.5%</i>	<i>13.7%</i>	<i>13.4%</i>	<i>14.6%</i>

²³ TAL Education and New Oriental were the only other U.S.-exchange-traded companies providing educational services in China during the Class Period. TAL Education's fiscal year ends the last day of February while New Oriental's ends on May 30. While the two companies report quarterly, it is not possible to obtain data that precisely matches the calendar year. Thus, the figures for each entry for both companies consist of: 2019: the year ending November 30, 2019; 1H 2020: the six-month period ending May 30, 2020; 1H2020: the six-month period ending November 30, 2020; 1H 2021: the six-month period ending May 30, 2021.

192. Consistent with this explanation of GSX's massive marketing and sales expenses, those expenses continued to soar despite Defendants' explanations blaming short-term issues:

(a) In the Q2 2019 and Q3 2019 earnings calls, Defendants claimed that GSX's business was seasonal and marketing expenses were highest during the summer. As Chen stated on the Q3 2019 earnings call, GSX makes heavy sales and marketing investments between May and August.

(b) Discussing Q1 2020 earnings, Defendants maintained that sales expenses were high because GSX had prepaid RMB 200 million.

(c) Discussing Q2 2020 earnings, Defendant Shen asserted that "the main cause behind the loss was our advanced traffic acquisition in the summer semester in Q2." According to Defendant Shen, GSX had once again prepaid RMB 200 million for Q3 2020 expenses. These expenditures would generate gross billings in Q3 and Q4, but were incurred in Q2.

(d) Yet H2 2020 marketing expenditures dwarfed H1 2020. Discussing Q3 2020 earnings, which included \$303 million in selling expenses, Defendant Shen asserted that "if we look at our market data, in the third quarter, just look at online live large-class, in terms of revenue we're actually with the top -- among the top number -- top our players and we know that summer is always the critical moment for new enrollment recruitment across the whole year. So we did strategically expand our investments."

(e) Q4 2020 selling expenses jumped to \$310 million, or even more than Q3, though it supposedly fell during GSX's less active promotional period.

Discussing Q4 2020 earnings, Defendant Shen blamed spending on social media platforms. But Shen assured investors that the spending would decrease: “[I]n the second half of 2020, we started to explore new channels. And for the traffic acquisition from social media platforms, it's still like the whole industry highly relies on the algorithm provided by the agencies or the social media platforms. The high cost of reliance cannot translate into core capabilities or competitive advantage and that's why we want to explore new channels. So we did make some breakthroughs like, for instance, our private traffic pool metrics on some leading short video platforms has been at the top level of the industry.”

(f) Q1 2020 selling expenses were higher still, at \$349 million. On the Q1 2020 earnings call, Shen revealed that GSX had not transferred its sales and marketing to cheaper alternatives. Instead, “the traffic acquisition from performance [ph] channel still account for a pretty high proportion and because of this fierce market competition, the customer acquisition cost of the performance channels this quarter is up by several times compared to the same period of last year that somehow also cost the change of our gross billings.” But Shen assured investors that “in March, we have very significantly reduced our spending in this traffic acquisition on performance channels and at this moment, we have completely stopped our spending in traffic acquisition from the performance channel.

(g) Yet while selling expenses decreased, they still amounted to RMB 1.64 billion in Q2 2021, or about as much as Q2 2020.

C. As Investors Began To Learn that GSX Techedu Massively Overstates Its User Base and Revenues, GSX Techedu's Share Price Fell

193. GSX's dramatic and unexplainable growth gave rise to extensive scrutiny from market analysts and government regulators beginning in February 2020. On February 25, 2020, Grizzly Research LLC published a report detailing the extent to which GSX has brushed its enrollment figures, overstated its revenues, and engaged in undisclosed related-party transactions. Less than two months later, on April 2, 2020, the Beijing Normal University issued a report condemning the Company's online large class format as incompatible with Chinese educational standards. Citron Research and Muddy Waters Capital LLC followed with their own reports on April 14 and May 18, 2020, respectively. On August 7, 2020, Andrew Left of Citron Research reported his findings during a primetime FOX Business interview. On or about September 2, 2020, the Company disclosed to investors that the SEC's Division of Enforcement commenced an investigation into the Company's financial and operating records dating to 2017. Finally, on October 20, 2020, market reports revealed, among other things, that the Company's revenue had been profoundly overstated, at which point the share price of GSX fell nearly 30%, by almost eight billion dollars, in a single day.

194. Each of these disclosures revealed material facts to the market that GSX had a duty to disclose but failed to disclose, and also revealed that hundreds of statements made by the Company to its investors during the Class Period were materially false or misleading at the time they were made. A decline in the value of GSX's ADSs followed each disclosure, damaging Plaintiffs and all members of the Class.

V. DEFENDANTS' FALSE AND MISLEADING STATEMENTS

A. Defendants' False and Misleading Statements in 2019

1. May 8, 2019: The Initial Public Offering Documents

195. On May 8, 2019, GSX filed a Form F-1 Registration Statement with the SEC (the “May 2019 F-1”). On May 24, 2019, the Company filed an Amended Form F-1 Registration Statement (the “May 2019 F-1/A”), Form F-6 Registration Statement for American Depositary Shares Evidenced by American Depositary Receipts (the “F-6”), and Form F8-A12B Description of Securities.

196. In the May 2019 F-1/A, GSX represented that its “total enrollments increased from 79,632 in 2017 to 767,102 in 2018 and from 70,845 for the three months ended March 31, 2018 to 211,002 for the three months ended March 31, 2019” (*i.e.*, increases of 863.31% from 2017 to 2018 and of 197.84% from 1Q2018 to 1Q2019). According to the Company, “[p]aid course enrollments increased by 632.7% from 56,350 [students] to 412,871 [students] in 2018.” The Company said that the “average enrollments of [its] online K-12 courses increased from approximately 400 [students] per course in 2017 to approximately 600 [students] per course in 2018, and from approximately 440 per course for the three months ended March 31, 2018 to approximately 980 per course for the same period in 2019.” The Company attributed these successes to its adoption of “the online live large-class format,” explaining that this pedagogical method to deliver “scarce high quality teaching resources to aspiring students in China” coupled with GSX’s “focus on operational efficiency” drove its profits in 2018.

197. The statements in the above paragraph were materially false and misleading because: (1) GSX routinely falsified at least 70% of its student enrollment by (a) using software bots to falsify student enrollments in GSX courses and to falsify logins to those online courses, and (b) engaging third parties as well as its instructors and tutors to assume the identities of

student users to purchase and enroll in GSX courses and then sign-in to those online courses; and (2) GSX's GSX's stated reasons for its success are materially false and misleading because the Company failed to disclose that its purported success was due primarily to its illegally falsified student enrollments and inflated revenues, or at a minimum, due to its illegal marketing practices.

198. Also in the May 2019 F-1/A, GSX represented that its net revenues increased from “¥97,580,000” in 2017 to “397,306,000” in 2018, a 307.16% increase. The Company claimed a gross profit of ¥72,557,000 in 2017 versus ¥254,553,000 in 2018, a 250.83% increase, and for the “three months ended March 31, 2019” versus the same time period in 2018, GSX represented that its gross profit increased by 613.53%, from ¥26,223,000 in 2018 to ¥187,110,000 in 2019. GSX stated that its “income from operations” increased by 120.72%, from a loss of ¥92,427,000 in 2017 to a gain of ¥19,154,000 in 2018. For “the three months ended March 31, 2019,” the Company reported that its income from operations increased by 1,127.09% compared with the same time period in 2018, from a loss of ¥4,160,000 in 2018 to a gain of ¥42,727 in 2019. The Company also stated, “Our core expertise is in online K-12 courses, covering all primary and secondary grades, which contributed over 73% and 75% of our total revenues in 2018 and for the three months ended March 31, 2019, respectively.”

199. The statements in the above paragraph were materially false and misleading because: (1) More than half of GSX's revenues and profits, including gross billings, were falsified, throughout the Class Period; and (2) GSX's stated reasons for its success are materially false and misleading because the Company failed to disclose that its purported success was due primarily to its illegally falsified student enrollments and inflated revenues, or at a minimum, due to its illegal marketing practices.

2. August 22 and 23, 2019: 2Q2019 Earnings Results

200. On August 23, 2019, GSX filed, and Defendant Shen signed, a Form 6-K with the SEC, attaching and incorporating as an exhibit a press release dated August 22, 2019 detailing the Company's quarterly earnings results for 2Q2019 (together, comprising the "August 2019 6-K"). In the August 2019 6-K, GSX stated: "[t]otal enrollments increased 250.3% to 592,000 from 169,000" during this period.

201. The statements in the above paragraph were materially false and misleading because GSX routinely falsified at least 70% of its student enrollment by (a) using software bots to falsify student enrollments in GSX courses and to falsify logins to those online courses, and (b) engaging third parties as well as its instructors and tutors to assume the identities of student users to purchase and enroll in GSX courses and then sign-in to those online courses.

202. Separately in the August 2019 6-K, the Company claimed that its "[n]et revenues increased 413.4% year-over-year to ¥353.7 million, from ¥68.9 million." GSX reported that "[g]ross profit increased 496.7% to ¥252.5 million from ¥42.3 million in the second quarter of 2018," while [i]ncome from operations increased to ¥16.2 million from a loss from operations of ¥0.5 million in the second quarter of 2018," an increase of 3,340%.

203. The statements in the above paragraph were materially false and misleading because: (1) GSX's revenues, including gross billings, were materially overstated, by at least 70%, throughout the Class Period.

204. The Company claimed that its "[c]ost of revenues rose 280.8% to ¥101.2 million from ¥26.6 million, . . . mainly due to an increase in compensation for instructors and tutors." GSX further represented that its "[s]elling expenses increased to ¥169.0 million from ¥18.4 million" (*i.e.*, an 818.48% increase), "primarily as a result of higher marketing expenses to expand the customer base and enhance the brand, as well as an increase in compensation to sales

and marketing staff.” Further, the Company told investors that its “[r]esearch and development expenses increased 164.2% to ¥41.1 million from ¥15.6 million, . . . primarily due to a rise in the number of course[] professionals, educational content professionals, and technology development personnel, as well as an increase in compensation for such staff.”

205. The statements in the above paragraph were materially false and misleading because GSX failed to disclose that a material percentage of its cost of revenues, selling expenses, and research and development expenses, and increases in those expenses, were attributable to payments to third-party brushers to assume the identities of student users to purchase and enroll in GSX courses and then sign-in to those online courses, and to write false reviews of the courses.

206. On August 22, 2019, Defendants Chen and Shen presented GSX’s 2Q2019 results to investors on a teleconference (the “August 2019 Earnings Call”). On the August 2019 call, Defendant Shen claimed that the “[n]et revenue from [the] K-12 courses increased by 463.7%,” accounting for “76.4% of net revenues” in 2Q2019. Shen claimed that the revenue growth “was primarily driven by [an] increase in paid course enrollments and K-12 students’ tuition fees.” According to Shen, the Company’s “across-the-board growth was primarily driven by the continued expansion of [the Company’s] K-12 after-school tutoring business.” Shen also claimed that paid student enrollments (in courses whose tuition was greater than ¥9.90) rose to 592,000 students, a 350% increase year-over-year. Shen attributed this growth principally to “the continued expansion” of GSX’s “K-12 after-school tutoring business,” in which paid enrollments “increased by 372%,” year-over-year, from “68,000” to “321,000” students.

207. The statements in the above paragraph were materially false and misleading because: (1) More than half of GSX’s revenues and profits, including gross billings, were

falsified, throughout the Class Period; (2) GSX routinely falsified at least 70% of its student enrollment by (a) using software bots to falsify student enrollments in GSX courses and to falsify logins to those online courses, and (b) engaging third parties as well as its instructors and tutors to assume the identities of student users to purchase and enroll in GSX courses and then sign-in to those online courses; and (3) GSX's stated reasons for its success are materially false and misleading because the Company failed to disclose that its purported success was due primarily to its illegally falsified student enrollments and inflated revenues, or at a minimum, due to its illegal marketing practices.

208. August 2019 Earnings Call, Shen further stated, that GSX's costs of revenues increased "by 281%" year-over-year, from "¥26.6 million to ¥101.2 million," because GSX increased its recruitment of teaching staff. Shen attributed the increase in GSX's selling expenses to the Company's efforts to "extend market share to attract new students, especially for summer campaign and for brand enhancement." According to Shen, research and development expenses "increased by 164.2%" year-over-year, from ¥25.03 million "to ¥41.1 million.," purportedly attributable to the "efficiency and effectiveness of [GSX]'s teaching for data delivery" and for its "operational efficiency."

209. The statements in the above paragraph were materially false and misleading because GSX failed to disclose that a material percentage of its cost of revenues, selling expenses, and research and development expenses were in fact expenses paid to third-party brushers to assume the identities of student users to purchase and enroll in GSX courses and then sign-in to those online courses, and to write false reviews of the courses.

210. Responding to investors' and market analysts' concerns about GSX's customer acquisition channels, Shen claimed that GSX acquires most new enrollments "through traffic

acquisition,” driven by “WeChat,” including “WeChat Official Accounts, WeChat Moments, news feed ad[s],” and through “TikTok, Toutiao, and Baidu.” Shen also claimed that GSX’s customer acquisition efficiency is at least “twice or even several times as high” as that of its competitors because the Company has “developed a really efficient technology to closely monitor [its] customer acquisition process.”

211. The statements in the above paragraph were materially false and misleading because GSX acquired most of its purported student enrollment by (a) using software bots to falsify student enrollments in GSX courses and to falsify logins to those online courses, and (b) engaging third parties as well as its instructors and tutors to assume the identities of student users to purchase and enroll in GSX courses and then sign-in to those online courses.

3. November 5 and 7, 2019: 3Q2019 Earnings Results

212. On November 7, 2019, GSX filed, and Defendant Shen signed, a Form 6-K with the SEC, attaching and incorporating as an exhibit a press release dated November 5, 2019 detailing the Company’s quarterly earnings results for 3Q2019 (together, comprising the “November 2019 6-K”). The Company claimed that its “[n]et revenues reached ¥557.0 million, a 461.5% increased from ¥99.2 million . . . mainly driven by the growth in paid course enrollments for K-12 courses and a higher level of tuition fees that were charged to K-12 students.” GSX reported that “[g]ross profit increased 548.8% to ¥400.3 million from ¥61.7 million in the third quarter of 2018” and that its “[l]oss from operations was ¥10.8 million, compared with income from operations of ¥0.1 million in the third quarter of 2018.”

213. The statements in the above paragraph were materially false and misleading because: (1) More than half of GSX’s revenues and profits, including gross billings, were falsified, throughout the Class Period; (2) GSX’s stated reasons for its success are materially false and misleading because the Company failed to disclose that its purported success was due

primarily to its illegally falsified student enrollments and inflated revenues, or at a minimum, due to its illegal marketing practices.

214. In the November 2019 6-K, the Company claimed that its “[c]ost of revenues rose 316.8% to ¥156.7 million from ¥37.6 million . . . mainly due to an increase in compensation for instructors and tutors.” GSX represented that its “[s]elling expenses increased to ¥330.4 million from ¥31.0 million” (*i.e.*, an increase of 965.81%)” “primarily a result of higher marketing expenses to expand the customer base and enhance the brand, as well as an increase in compensation to sales and marketing staff.” Further, the Company told investors that its “[r]esearch and development expenses increased 185.5% to ¥57.1 million from ¥20.0 million, . . . primarily due to an increase in the number of course[] professionals, educational content professionals, and technology development personnel, as well as an increase in compensation for such staff.”

215. The statements in the above paragraph were materially false and misleading because GSX failed to disclose that a material percentage of its cost of revenues, selling expenses, and research and development expenses were in fact expenses paid to third-party brushers to assume the identities of student users to purchase and enroll in GSX courses and then sign-in to those online courses, and to write false reviews of the courses.

216. According to GSX, “[t]otal enrollments increased” by “240.2% year-over-year to 820,000.”

217. The statements in the above paragraph were materially false and misleading because GSX routinely inflated its student enrollment figures by at least 70% by (a) using software bots to falsify student enrollments in GSX courses and to falsify logins to those online

courses, and (b) engaging third parties as well as its instructors and tutors to assume the identities of student users to purchase and enroll in GSX courses and then sign-in to those online courses.

218. On November 5, 2019, Defendants Chen and Shen presented GSX's 3Q2019 results to investors on a teleconference (the "November 2019 Earnings Call"). Shen represented that GSX's year-over-year quarterly net revenue "increased 462%," citing "solid accumulation in both education experience and technology resource[s]." Shen then claimed that GSX achieved and maintained "profitable growth" by improving its "ability to control costs and operating expenses. Shen also claimed that GSX's gross billings increased "by 420%" year-over-year, citing "increasing student enrollments" driven by "promotion efforts." For GSX's main revenue driver, the K-12 courses, Shen said that net revenue increased "by 526%" year-over-year, accounting for 82% of GSX's net revenues, and that the increase was attributable to an "increase in paid course enrollments and the K-12 students' tuition fees." Shen stated that paid enrollments for the "K-12 after-school tutoring business increased by 368% year-over-year," further claiming that this segment grew "at a much higher speed compared to other segments." Shen attributed the foregoing to GSX's "superior teaching quality." Furthermore, Shen said that average enrollments per class increased from 1,200 to 1,400 (*i.e.*, 116.67%) between 2Q2019 and 3Q2019.

219. The statements in the above paragraph were materially false and misleading because: (1) More than half of GSX's revenues and profits, including gross billings, were falsified, throughout the Class Period; (2) GSX routinely falsified at least 70% of its student enrollment by (a) using software bots to falsify student enrollments in GSX courses and to falsify logins to those online courses, and (b) engaging third parties as well as its instructors and tutors to assume the identities of student users to purchase and enroll in GSX courses and then sign-in

to those online courses; and (3) GSX's stated reasons for its success are materially false and misleading because the Company failed to disclose that its purported success was due primarily to its illegally falsified student enrollments and inflated revenues, or at a minimum, due to its illegal marketing practices.

220. On the November 2019 Earnings Call, Shen stated that GSX's cost of revenues increased "by 317% year-over-year," from "¥38 million to ¥157 million." Shen said that GSX increased its recruitment of teaching staff to accommodate the increased enrollments and expanded course offerings. To explain the 1,065.81% year-over-year increase in selling expenses (*i.e.*, from ¥31 million to ¥330.4 million), Shen pointed to "more marketing expenses, especially for the summer campaign to attract new students and expand market share and for brand enhancement." Similarly, Shen explained the 185.5% year-over-year increase in research and development expenses as a result of adding "innovative designs to [its] classes and an update to GSX's course materials."

221. The statements in the above paragraph were materially false and misleading because GSX failed to disclose that a material percentage of its cost of revenues, selling expenses, and research and development expenses were in fact expenses paid to third-party brushers to assume the identities of student users to purchase and enroll in GSX courses and then sign-in to those online courses, and to write false reviews of the courses.

4. November 18, 2019: The SPO

222. On November 18, 2019, GSX filed a Form F-1 Registration Statement (the "November 2019 F-1"), wherein the Company represented that GSX was "the third largest online K-12 large-class after-school tutoring service provider in China in terms of gross billings in 2018," that its K-12 courses "contributed over 73%" to the Company's "total revenues in 2018" and over 79% to the Company's total revenues in 3Q2019. GSX claimed that its "net

revenues increased by 307.1%,” from “¥97.6 million in 2017” to “¥397.3 million (US \$55.6 million) in 2018.” GSX claimed that its gross profit increased from ¥72,557 in 2017 to ¥254,553,000 in 2018, and from ¥130,226,000 for the “nine months ended September 30, 2018” to ¥839,903,000 for the same time period in 2019. The Company represented that its income from operations in 2017 generated a loss of ¥92,427,000 in 2017, a gain of ¥19,154,000 in 2018; for the “nine months ended September 30, 2018,” GSX reported an income loss from operations of ¥4,619,000, compared with a ¥48,138,000 gain for the same period in 2019.

223. The statements in the above paragraph were materially false and misleading because more than half of GSX’s revenues and profits, including gross billings, were falsified, throughout the Class Period.

224. In the November 2019 F-1, GSX represented that total enrollment in its courses “increased from 79,632 [students] in 2017 to 767,102 [students] in 2018” and, for the nine-month period beginning on January 1 and ending on September 30 in both years, “from 480,458” students in 2018 “to 1,622,862” students in 2019. GSX also claimed that “[t]he average enrollments of our online K-12 courses increased from approximately 400 per course in 2017 to approximately 600 per course in 2018, and approximately 570 per course in the nine months ended September 30, 2018 to approximately 1,200 per course in the same period in 2019.”

225. The statements in the above paragraph were materially false and misleading because GSX routinely inflated its student enrollment figures by at least 70% by (a) using software bots to falsify student enrollments in GSX courses and to falsify logins to those online courses, and (b) engaging third parties as well as its instructors and tutors to assume the identities of student users to purchase and enroll in GSX courses and then sign-in to those online courses.

B. Defendants' False and Misleading Statements in 2020

1. February 18 and 19, 2020: 4Q2019 Earnings Report

226. On February 19, 2020, GSX filed, and Defendant Shen signed, a Form 6-K with the SEC, attaching and incorporating as an exhibit a press release dated February 18, 2020 detailing the Company's quarterly earnings results for 4Q2019 and for Fiscal Year 2019 (together, comprising the "February 2020 Report"). For the quarter, the Company claimed that its "[n]et revenues reached "¥935.0 million, a 412.9% increase from ¥182.265 million . . . mainly driven by growth in paid course enrollments for K-12 courses." The Company reported that its "[g]ross profit increased 494.5% to ¥739.0 million from ¥124.3 million in the fourth quarter of 2018," and that its "[i]ncome from operations was ¥167.6 million, compared with ¥23.8 million in the fourth quarter of 2018."

227. The statements in the above paragraph were materially false and misleading because: (1) More than half of GSX's revenues and profits, including gross billings, were falsified, throughout the Class Period; (2) GSX routinely falsified at least 70% of its student enrollment by (a) using software bots to falsify student enrollments in GSX courses and to falsify logins to those online courses, and (b) engaging third parties as well as its instructors and tutors to assume the identities of student users to purchase and enroll in GSX courses and then sign-in to those online courses; and (3) GSX's stated reasons for its success are materially false and misleading because the Company failed to disclose that its purported success was due primarily to its illegally falsified student enrollments and inflated revenues, or at a minimum, due to its illegal marketing practices.

228. In the February 2020 Report, for the quarter, the Company stated that its "[c]ost of revenues rose 238.5% to ¥196.0 million from ¥57.9 million, . . . mainly due to the increase in compensation for instructors and tutors, learning materials and other operating related expenses

[sic].” GSX represented that its “[s]elling expenses increased to ¥442.0 million from ¥58.2 million” (*i.e.*, an increase of 659.45%) “primarily as a result of higher marketing expenses to expand the customer base and enhance the brand, as well as an increase in compensation to sales and marketing staff.”²⁴ Further, the Company told investors that its “[r]esearch and development expenses increased 215.1% to ¥83.5 million, from ¥26.5 million, . . . primarily due to an increase in the number of course professionals, educational content professionals and technology development personnel, as well as an increase in compensation for such staff.”

229. The statements in the above paragraph were materially false and misleading because GSX failed to disclose that a material percentage of its cost of revenues, selling expenses, and research and development expenses were in fact expenses paid to third-party brushers to assume the identities of student users to purchase and enroll in GSX courses and then sign-in to those online courses, and to write false reviews of the courses.

230. In the February 2020 Report, for the fiscal year, the Company claimed that its “[n]et revenues reached “¥2,114.9 million, a 432.3% increase from ¥397.3 million . . . mainly driven by the growth in paid course enrollments for K-12 courses and a higher level of tuition fees that was [sic] charged to K-12 students.” GSX reported that its “[g]ross profit increased 520.1% to ¥1,578.9 million, from ¥254.6 million in 2018,” and that its “[i]ncome from operations increased to ¥215.7 million, from ¥19.2 million in 2018,” a 1,023.44% increase.

231. The statements in the above paragraph were false and materially misleading because: (1) More than half of GSX’s revenues and profits, including gross billings, were falsified, throughout the Class Period; (2) GSX routinely falsified at least 70% of its student enrollment by (a) using software bots to falsify student enrollments in GSX courses and to falsify

²⁴ This is the same explanation the Company gave in the November 2019 6-K, verbatim.

logins to those online courses, and (b) engaging third parties as well as its instructors and tutors to assume the identities of student users to purchase and enroll in GSX courses and then sign-in to those online courses; and (3) GSX's stated reasons for its success are materially false and misleading because the Company failed to disclose that its purported success was due primarily to its illegally falsified student enrollments and inflated revenues, or at a minimum, due to its illegal marketing practices.

232. In the February 2020 Report, for the fiscal year, the Company claimed that its “[c]ost of revenues increased by 275.3% to ¥535.9 million, from ¥142.8 million, . . . mainly due to an increase in compensation for instructors and tutors, learning materials *and other related operating expenses*.” GSX represented that its “[s]elling expenses increased to ¥1,040.9 million, from ¥121.5 million” (*i.e.*, an increase of 757.41%) “primarily a result of an *increase in marketing expenses to expand the customer base and for brand enhancement*, as well as an increase in compensation to sales and marketing staff.” Further, the Company told investors that its “[r]esearch and development expenses increased 186.4% to ¥212.2 million, from ¥74.1 million, . . . primarily due to an increase in the number of course professionals, educational content professionals, and technology development personnel, as well as an increase in compensation for such staff.”

233. The statements in the above paragraph were materially false and misleading because GSX failed to disclose that a material percentage of its cost of revenues, selling expenses, and research and development expenses were in fact expenses paid to third-party brushers to assume the identities of student users to purchase and enroll in GSX courses and then sign-in to those online courses, and to write false reviews of the courses.

234. In the February 2020 Report, for the quarter, GSX claimed that “[t]otal enrollments increased 290.2% year-over-year to 1,120,000” students, up from “287,000” students. For the fiscal year, GSX represented that “[t]otal enrollments increased 257.6% year-over-year to 2,743,000” students, up from “767,000” students.

235. The statements in the above paragraph were materially false and misleading because GSX routinely inflated its student enrollment figures by at least 70% by (a) using software bots to falsify student enrollments in GSX courses and to falsify logins to those online courses, and (b) engaging third parties as well as its instructors and tutors to assume the identities of student users to purchase and enroll in GSX courses and then sign-in to those online courses.

236. In the February 2020 Report, Defendant Shen attributed the “lightspeed growth” of revenues from the Company’s K-12 business to “paid enrollments,” which Shen represented “increased 410% year-over-year.”

237. The statements in the above paragraph were materially false and misleading because: (1) More than half of GSX’s revenues and profits, including gross billings, were falsified, throughout the Class Period; and (2) GSX’s stated reasons for its success are materially false and misleading because the Company failed to disclose that its purported success was due primarily to its illegally falsified student enrollments and inflated revenues, or at a minimum, due to its illegal marketing practices.

238. On February 18, 2020, Defendants Chen and Shen presented GSX’s 4Q2019 and Fiscal Year 2019 results to investors on a teleconference (the “February 2020 Earnings Call”).

239. On the February 2020 Earnings Call, Shen claimed that:

Total enrollments, which refers to enrollments to courses priced at or above ¥9.9, hit a record high of 1.12 million, which was 3.9x that of the same period of 2018. Paid enrollments, which refer to enrollments priced at or above ¥99, increased to 1.1 million or 4.4x that of the same period of 2018. In addition, we also provide

promotional classes priced at ¥9 all for free, which contributed a large lot of enrollments.

240. The statements in the above paragraph were materially false and misleading because GSX routinely inflated its student enrollment figures by at least 70% by (a) using software bots to falsify student enrollments in GSX courses and to falsify logins to those online courses, and (b) engaging third parties as well as its instructors and tutors to assume the identities of student users to purchase and enroll in GSX courses and then sign-in to those online courses.

241. On the February 2020 Earnings Call, Shen represented that:

Net revenue from our K-12 courses increased by 468% year-over-year to ¥773 million and accounted for 83% of net revenues. [...] Among K-12, I want to highlight our primary school business, whose revenue grew by 894% year-over-year in the fourth quarter. The revenue generated by primary school sector is not only increasing in absolute amount, but also accelerating in growth rate. We were able to achieve this because we've prioritized our primary school business as a strategic focus and invested considerable time and resources in upgrading the course content and learning experience.

242. The statements in the above paragraph were materially false and misleading because: (1) More than half of GSX's revenues and profits, including gross billings, were falsified, throughout the Class Period; (2) GSX's stated reasons for its success are materially false and misleading because the Company failed to disclose that its success was due primarily to its illegally falsified student enrollments and inflated revenues, or at a minimum, due to its illegal marketing practices.

243. On the February 2020 Earnings Call, Shen further stated that:

Our cost of revenues increased by 239% year-over-year to ¥196 million. The year-over-year growth rate was less than that of revenue, primarily attributed to the economics of scale of large class business model.

[. . .]

Selling expenses increased to ¥442 million, up from ¥58 million in the fourth quarter of 2018. The increase was primarily a result of more marketing expenses to attract new students, expand market share and enhance brand awareness.

[. . .]

Research and development expenses increased by 215% year-over-year to ¥84 million. We constantly work our ways to apply the latest technology to improve the learning experience. We will consistently invest in research and development, hire the most talented professionals and enhance the operational efficiencies leveraging technologies.

244. The statements in the above paragraph were materially false and misleading because GSX failed to disclose that a material percentage of its cost of revenues, selling expenses, and research and development expenses were in fact expenses paid to third-party brushers to assume the identities of student users to purchase and enroll in GSX courses and then sign-in to those online courses, and to write false reviews of the courses.

245. On the February 2020 Earnings Call, responding to a market analyst's questions concerning the Company's customer acquisition strategy, Shen claimed that GSX is "very unique" because "it's most likely that if a company grows as fast as us [*sic*], they will be [*sic*] in a deficit position. We can be profitable only because we are very lucky that we are in education industry [*sic*]."

246. GSX's stated reasons in the above paragraph for its success were materially false and misleading because the Company failed to disclose that its purported success was due primarily to its illegally falsified student enrollments and inflated revenues, or at a minimum, due to its illegal marketing practices.

2. April 3, 2020: 2020 Form 20-F

247. On April 3, 2020, the Company filed a Form 20-F Annual Registration Statement with the SEC (the "2020 20-F"). Defendant Chen signed the 2020 20-F. In this document, the

Company stated that its K-12 courses contributed to “73.2% and 80.7%, respectively, of [its] total revenues in 2018 and 2019.” The Company claimed that “[i]n 2018 and 2019, [it] derived substantially all of [its] net revenues from the course fees that [it] charge to [its] students [sic]” and that it “generally collect[s] course fees in advance.” GSX represented that its net revenues totaled “¥97,580,000” in 2017; “¥397,306,000” in 2018; and “¥2,114,855,000” in 2019 (i.e., that its net revenues increased by 307.16% from 2017 to 2018 and by 432.30% from 2018 to 2019. The Company reported that its “gross profit increased by 520.1% from ¥254.6 million in 2018 to ¥1,578.9 million (US \$226.8 million) in 2019” and that its “income from operations increased from ¥19.2 million in 2018 to ¥215.7 million (US \$31.0 million) in 2019.”

248. The statements in the above paragraph were materially false and misleading because: (1) More than half of GSX’s revenues and profits, including gross billings, were falsified, throughout the Class Period; and (2) GSX’s stated reasons for its success are materially false and misleading because the Company failed to disclose that its purported success was due primarily to its illegally falsified student enrollments and inflated revenues, or at a minimum, due to its illegal marketing practices.

249. Also in the 2020 20-F, the Company claimed that its “cost of revenues primarily consists of performance-based salaries to instructors and total compensation to tutors” as well as “costs for teaching materials, rental expenses for [its] office space and server and bandwidth costs,” and that the Company “recorded cost of revenues of ¥25.0 million, ¥142.8 million, and ¥535.9 million (US \$77.0 million) in 2017, 2018 and 2019, respectively” (i.e., increases of 471.2% between 2017 and 2018 and of 275.28% between 2018 and 2019). The Company claimed that its “selling expenses primarily consist of expenses relating to [its] marketing and brand promotion activities, compensation to [its] personnel involved in sales and marketing,

traffic acquisition expenses and other miscellaneous expense [sic],” and that it “recorded selling expenses of ¥75.3 million, ¥121.5 million, and ¥1,040.9 million in 2017, 2018 and 2019, respectively (*i.e.*, increases of 61.35% from 2017 to 2018 and of 756.71% from 2018 to 2019). GSX also stated that its “[r]esearch and development expenses consist primarily of compensation to [its] education content development personnel, and to [its] technology development personnel, and to a lesser extent, rental expenses for office space and server and bandwidth costs and others,” claiming that the Company “recorded research and development expenses of ¥52.5 million, ¥74.1 million and ¥212.2 million (US \$30.5 million) in 2017, 2018 and 2019, respectively” (*i.e.*, increases of 41.14% between 2017 and 2018 and of 186.37% between 2018 and 2019).

250. The statements in the above paragraph were materially false and misleading because GSX failed to disclose that a material percentage of its cost of revenues, selling expenses, and research and development expenses were in fact expenses paid to third-party brushers to assume the identities of student users to purchase and enroll in GSX courses and then sign-in to those online courses, and to write false reviews of the courses.

251. Also in the 2020 20-F, the Company claimed that its total enrollments “increased from 79,632 in 2017 to 767,102 in 2018 and further increased to 2,742,545 in 2019” (*i.e.*, that total enrollments increased by 863.31% between 2017 and 2018 and by 257.52% between 2018 and 2019). According to the Company, “average enrollments of [its] online K-12 courses increased from approximately 400 per course in 2017 to approximately 600 per course in 2018, and further increased to approximately 1,200 per course in 2019” (*i.e.*, by 50% from 2017 to 2018 and by 100% from 2018 to 2019). According to the Company, “[i]n 2019, 89.5% of [its]

paid course enrollments were from [its] K-12 courses, compared to 74.8% in 2018 and 86.6% in 2017.”

252. The statements in the above paragraph were materially false and misleading because GSX routinely inflated its student enrollment figures by at least 70% by (a) using software bots to illegally falsify student enrollments in GSX courses and to falsify logins to those online courses, and (b) engaging third parties as well as its instructors and tutors to assume the identities of student users to purchase and enroll in GSX courses and then sign-in to those online courses.

3. April 8, 2020: Statement by Chen

253. On April 8, 2020, Defendant Chen denied researchers’ initial analyses showing that the Company was falsifying student enrollments and revenue when he called upon Muddy Waters to investigate the Company for fraud and expressed confidence that nothing would be found: “I think if Muddy Waters analyses our data seriously, there is a high probability that Muddy Waters will not be so stupid. The level and IQ of the people in Muddy Waters is quite high.”

254. The statements in the above paragraph were materially false and misleading because: (1) More than half of GSX’s revenues and profits, including gross billings, were falsified, throughout the Class Period; and (2) GSX routinely falsified at least 70% of its student enrollment by (a) using software bots to falsify student enrollments in GSX courses and to falsify logins to those online courses, and (b) engaging third parties as well as its instructors and tutors to assume the identities of student users to purchase and enroll in GSX courses and then sign-in to those online courses.

4. April 9, 2020: “Market Concerns” Investors’ Call

255. On April 9, 2020, Defendants Chen and Shen held an impromptu teleconference with investors “to address market concerns.” Shen claimed that “[i]n 2019, [the Company] generated ¥3.358 billion in gross billings.” Defendant Chen then restated certain of GSX’s 2019 financials, claiming that “in 2019, the full year, [GSX] [is] actually the only one that realized a positive net profit,” the Company’s “revenue actually has a growth rate—year-over-year growth rate of over 400%.”

256. The statements in the above paragraph were materially false and misleading because more than half of GSX’s revenues and profits, including gross billings, were falsified, throughout the Class Period.

257. On April 9, 2020, Shen represented that “for Q42019, [the Company] reported 1.1 million paid enrollments.” In response to market reports that questioned the truthfulness of GSX’s enrollment figures in light of the Company’s own user download data, Shen claimed that “total monthly new users for GSX and Gaotu Ketang apps were 2.21 million for the second half in 2019, ranking up the third among education peers.” Shen claimed that market reports to the contrary were “not accurate, reliable or applicable to [GSX]’s business model.”

258. The statements in the above paragraph were materially false and misleading because GSX routinely inflated its student enrollment figures by at least 70% by (a) using software bots to falsify student enrollments in GSX courses and to falsify logins to those online courses, and (b) engaging third parties as well as its instructors and tutors to assume the identities of student users to purchase and enroll in GSX courses and then sign-in to those online courses.

259. On the April 9, 2020 conference call, Chen stated, “[W]e decided not to respond to Grizzly’s short report. The report is full of irrelevant and false allegations and a lack of basic accounting knowledge.”

260. The statements in the above paragraph were materially false and misleading because: (1) More than half of GSX's revenues and profits, including gross billings, were falsified, throughout the Class Period; (2) GSX routinely falsified at least 70% of its student enrollment by (a) using software bots to falsify student enrollments in GSX courses and to falsify logins to those online courses, and (b) engaging third parties as well as its instructors and tutors to assume the identities of student users to purchase and enroll in GSX courses and then sign-in to those online courses; and (3) the allegations in the Grizzly report were accurate.

5. April 15, 2020: GSX Denies Citron Report

261. On April 15, 2020, GSX issued a press release stating: "GSX Techedu Inc. . . . today firmly denied the false and ungrounded allegations raised in a report by Citron Research dated April 14, 2020."

262. The statements in the above paragraph were materially false and misleading because: (1) the report by Citron Research dated April 14, 2020 claimed, among other things, that "GSX Techedu Inc. is overstating revenue by up to 70%" and more than half of GSX's revenues and profits, including gross billings, were falsified, throughout the Class Period; (2) GSX routinely falsified at least 70% of its student enrollment by (a) using software bots to falsify student enrollments in GSX courses and to falsify logins to those online courses, and (b) engaging third parties as well as its instructors and tutors to assume the identities of student users to purchase and enroll in GSX courses and then sign-in to those online courses; (3) GSX's stated reasons for its success are materially false and misleading because the Company failed to disclose that its purported success was due primarily to its falsified student enrollments; and (4) the allegations in the Citron report were accurate.

6. May 6 and 7, 2020: 1Q2020 Earnings Report

263. On May 7, 2020, GSX filed, and Defendant Shen signed, a Form 6-K with the SEC, attaching and incorporating as an exhibit a press release dated May 6, 2020 detailing the Company's quarterly earnings results for 1Q2020 (together, comprising the "May 2020 6-K"). The Company claimed that its "[n]et revenues reached ¥1,297.6 million, a 382.05% increase from ¥269.2 million . . . mainly driven by the growth in paid course enrollments for K-12 courses." The Company reported that its "[g]ross profit increased 442.1% to ¥1,014.3 million from ¥187.1 million in the first quarter of 2019," and that its "[i]ncome from operations was ¥91.9 million, compared with ¥42.7 million in the first quarter of 2019."

264. The statements in the above paragraph were materially false and misleading because: (1) More than half of GSX's revenues and profits, including gross billings, were falsified, throughout the Class Period; and (2) GSX's stated reasons for its success are materially false and misleading because the Company failed to disclose that its purported success was due primarily to its illegally falsified student enrollments, or at a minimum, due to its illegal marketing practices.

265. The Company claimed that its "[c]ost of revenues rose 245.5% to ¥283.3 million from ¥82.0 million, . . . mainly due to the increase in compensation for instructors and tutors, learning materials, as well as the extra costs paid for supporting our services offered for free during the COVID-19 outbreak." GSX represented that its "[s]elling expenses increased to ¥757.2 million from ¥99.5 million" (*i.e.*, an increase of 661.0%) " "primarily a result of higher marketing expenses to expand the customer base and enhance [the Company's] brands, an increase in compensation to sales and marketing staff, as well as free course promotional expenses to acquire traffic during the COVID-19 outbreak." Further, the Company told investors that its "[r]esearch and development expenses increased 227.0% to ¥99.4 million from

¥30.4 million, . . . primarily due to an increase in the number of course professionals and technology development personnel, as well as an increase in compensation for such staff.”

266. The statements in the above paragraph were materially false and misleading because GSX failed to disclose that a material percentage of its cost of revenues, selling expenses, and research and development expenses were in fact expenses paid to third-party brushers to assume the identities of student users to purchase and enroll in GSX courses and then sign-in to those online courses, and to write false reviews of the courses.

267. According to GSX, “[p]aid course enrollments increased 307.4% year-over-year to 774,000.”

268. The statements in the above paragraph were materially false and misleading because GSX routinely inflated its student enrollment figures by at least 70% by (a) using software bots to illegally falsify student enrollments in GSX courses and to falsify logins to those online courses, and (b) engaging third parties as well as its instructors and tutors to assume the identities of student users to purchase and enroll in GSX courses and then sign-in to those online courses.

7. May 19, 2020: Denials of Bots, Brushing & Pledging

269. On May 19, 2020, in response to private investigations into GSX’s use of bots and enrollment brushing, Defendant GSX issued a press release from its Beijing headquarters. The release was published on PR Newswire and is available online.²⁵ The statement was issued by the corporate entity GSX, and referenced Ms. Sandy Qin, CFA for more information. In that press release, GSX stated:

²⁵ Available at: <https://www.prnewswire.com/news-releases/gsx-refutes-muddy-waters-researchs-allegations-301061639.html> (last accessed April 18, 2023).

GSX Techedu Inc. . . . today refuted the false allegations in Muddy Waters Research's latest report, dated May 18, 2020.

[. . .]

Burst joiners are caused when classes transition from tutors to instructors, which is a typical course procedure.

[. . .]

Precise joiners exist for the same reason, especially with respect to K-12 classes, which are typically delivered periodically. Early joiners are students who sign in early to participate in the tutor's prep sessions.

[. . .]

GSX reproduced the full dataset for all of the Company's paid classes between January and March 2020, and concluded that the IP overlap rate between students, instructors and tutors was only 0.78%, far less than the 28.2% claimed in the report. We believe that a 0.78% overlap is a reasonable level.

270. The statements in the above paragraph were materially false and misleading because: (1) the allegations in Muddy Waters Research's latest report, dated May 18, 2020 were not false; (2) burst joiners and precise joiners are not all caused when classes transition from tutors to instructors; (3) early joiners are not students who sign in early to participate in the tutor's prep sessions; (4) the IP overlap rate between students, instructors and tutors in the full dataset for all of the Company's paid classes between January and March 2020 is not only 0.78%; (5) More than half of GSX's revenues and profits, including gross billings, were falsified, throughout the Class Period; (6) GSX routinely falsified at least 70% of its student enrollment by (a) using software bots to illegally falsify student enrollments in GSX courses and to falsify logins to those online courses, and (b) engaging third parties as well as its instructors and tutors to assume the identities of student users to purchase and enroll in GSX courses and then sign-in to those online courses.

8. May 29, 2020: More Affirmative Denials of Bots & Brushing

271. On May 29, 2020, in response to private investigations into GSX's use of bots and enrollment brushing, GSX issued a press release wherein it stated:

GSX . . . today refuted the false allegations in Muddy Waters Research's latest 6-page report, dated May 28, 2020.

[. . .]

GSX's staff rely heavily on cellphones to communicate daily with students and parents. In line with the rapid growth in both students and employees, the Company requires enough engineers to conduct daily maintenance of cellphones, to improve communications efficiency and enhance cost control. That work has nothing to do with maintaining bot farms.

272. The statements in the above paragraph were materially false and misleading because: (1) the allegations in Muddy Waters Research's latest report, dated May 18, 2020 were not false; (2) the job postings for individuals with skills to "jailbreak" cellphones were not job postings for "engineers to conduct daily maintenance of cellphones," and the work sought in the job posting directly concerned "maintaining bot farms"; (3) more than half of GSX's revenues and profits, including gross billings, were falsified, throughout the Class Period; (4) GSX routinely falsified at least 70% of its student enrollment by (a) using software bots to falsify student enrollments in GSX courses and to falsify logins to those online courses, and (b) engaging third parties as well as its instructors and tutors to assume the identities of student users to purchase and enroll in GSX courses and then sign-in to those online courses.

9. June 3, 2020: GSX Denies Grizzly Research's Follow-up Report

273. On June 3, 2020, GSX stated:

GSX Techedu Inc. . . . today refuted the false allegations in Grizzly Research's follow up report, dated June 2, 2020.

[. . .]

The Company strictly complies with all relevant legal and regulatory requirements, as well as the terms and conditions of social media platforms.

274. The statements in the above paragraph were materially false and misleading because: (1) the allegations in Grizzly Research’s report, dated June 2, 2020, including the allegations that the Company was inflating student enrollments and revenue, were not false; (2) More than half of GSX’s revenues and profits, including gross billings, were falsified, throughout the Class Period; (3) GSX routinely inflated its student enrollment figures by at least 70% by (a) using software bots to falsify student enrollments in GSX courses and to falsify logins to those online courses, and (b) engaging third parties as well as its instructors and tutors to assume the identities of student users to purchase and enroll in GSX courses and then sign-in to those online courses; and (4) GSX does not strictly comply with all relevant legal and regulatory requirements, as its hiring of teachers without any teacher qualifications violates Chinese law.

10. September 2, 2020: 2Q2020 Earnings Report

275. On September 2, 2020, GSX filed, and Defendant Shen signed, a Form 6-K with the SEC, attaching and incorporating as an exhibit a press release dated September 2, 2020 detailing the Company’s quarterly earnings results for 2Q2020 (together, comprising the “September 2020 6-K”). The Company claimed that its “[n]et revenues reached ¥1,650.3 million, a 366.6% increase from ¥353.7 million, . . . mainly driven by the growth in paid course enrollments for K-12 courses.” The Company reported that its “[g]ross profit increased 410.8% to ¥1,289.7 million from ¥252.5 million in the second quarter of 2019,” and claimed that its “[l]oss from operations was ¥160.8 million, compared with income from operations of ¥16.2 million in the second quarter of 2019.” The Company claimed that “this decrease was primarily

due to higher investment in sales and marketing activities to extend volume growth and strengthen brand perception.”

276. The statements in the above paragraph were materially false and misleading because: (1) More than half of GSX’s revenues and profits, including gross billings, were falsified, throughout the Class Period; (2) GSX routinely falsified at least 70% of its student enrollment by (a) using software bots to falsify student enrollments in GSX courses and to falsify logins to those online courses, and (b) engaging third parties as well as its instructors and tutors to assume the identities of student users to purchase and enroll in GSX courses and then sign-in to those online courses; and (3) GSX’s stated reasons for its success are materially false and misleading because the Company failed to disclose that its purported success was due primarily to its falsified student enrollments.

277. The Company claimed that its “[c]ost of revenues rose 256.4% to ¥360.7 million from ¥101.2 million, . . . mainly due to an increase in compensation for instructors and tutors, learning materials, rental expenses, as well as server and bandwidth costs.” GSX represented that its “[s]elling expenses increased to ¥1,204.8. million from ¥169.0 million” (*i.e.*, an increase of 612.90%) “primarily a result of higher marketing expenses to expand the user base and enhance [the Company’s] brands, as well as an increase in compensation to sales and marketing staff.” Further, the Company told investors that its “[r]esearch and development expenses increased 240.4% to ¥139.9 million from ¥41.1 million, . . . primarily due to an increase in the number of course professionals and technology development personnel, as well as an increase in compensation for such staff.”

278. The statements in the above paragraph were materially false and misleading because GSX failed to disclose that a material percentage of its cost of revenues, selling

expenses, and research and development expenses were in fact expenses paid to third-party brushers to assume the identities of student users to purchase and enroll in GSX courses and then sign-in to those online courses, and to write false reviews of the courses.

279. According to GSX, “online K-12 paid course enrollments increased 366.0% year-over-year to 1,496 thousand driven by [the Company’s] effective investment in sales and marketing efforts.”

280. The statements in the above paragraph were materially false and misleading because GSX routinely inflated its student enrollment figures by at least 70% by (a) using software bots to illegally falsify student enrollments in GSX courses and to falsify logins to those online courses, and (b) engaging third parties as well as its instructors and tutors to assume the identities of student users to purchase and enroll in GSX courses and then sign-in to those online courses.

VI. LOSS CAUSATION

1. April 3, 2020

281. On April 3, 2020, GSX filed its 2019 Annual Report on Form 20-F with the SEC for the fiscal year ended December 31, 2019. In the 2020 20-F, the Company first disclosed that GSX’s online and mobile marketing costs had been responsible for much of the previously-reported increase in selling expenses. As reported on April 6 by a JP Morgan analyst, who was the only analyst who wrote about the April 20-F:

Last Friday, GSX released its first 20-F since the listing, for the year of 2019 (link). While most of the information was already covered in its earnings releases (see our 4Q19 takeaway and recent industry update notes), below we quickly summarize a few incremental points made available from 20-F.

[. . .]

Traffic acquisition costs (“online & mobile marketing” costs) rose +1367% to RMB728m in 2019 (vs. RMB50m in 2018), accounting for 70% of its Sales &

Marketing expenses (the rest is primarily compensations of sales and marketing staffs). This was equivalent to 34% of sales and 22% gross billings in 2019, compared to 12% and 8%, respectively, in 2018.

282. GSX's massive increase in online and mobile marketing costs was a partial revelation that the Company was spending a massive amount of money on bots and illegal brushing expenses to make itself appear larger than it actually was. As much of GSX's operations were fake, they did not generate cash. To explain the absence of cash, and conceal its illegal brushing transactions, GSX had to recognize fake corresponding expenses. Online and mobile marketing costs were the expense GSX employed to explain why its revenues were not generating any cash and conceal brushing. The increase was also the materialization of the risk concealed by GSX's misstatements that the Company ultimately would have to account for the fact that its revenues were far lower than it claimed.

283. Following the publication of the 2019 Annual Report, the price of GSX's ADSs fell by \$6.05 per share, or 15.52%, to close at \$32.93 per share on April 3, 2020.

2. April 14, 2020

284. On April 14, 2020, Citron Research published a report highlighting, among other things, that the Company's "2019 revenue was overstated by 70%," that "sales revenues are largely exaggerated," and that the Company's "filings are riddled with suspicious transactions."

285. To support its claims, Citron provided wholly new analysis to the market, including among other things that: (a) a professional brusher had described in detail the process GSX employed to fake enrollments; (b) GSX had overstated its revenues by 70%, based on tracking over 20% of GSX classes, collecting the number of unique enrollments, calculating course fees for those enrollments, and comparing the resulting total revenue to the Company's reported revenue; (c) surveys showed that GSX was a bit player in the Chinese education technology field; and (d) GSX had overstated the number of students in its courses.

286. On this news, the price of GSX's ADSs fell by \$0.20 per share, or 0.64%, to close at \$31.20 per share on April 14, 2020.

3. May 18 and 20, 2020

287. On May 18, 2020, Muddy Waters Capital LLC ("Muddy Waters") published a report in which they provided wholly new analysis to support the claim that the majority of GSX's operations were falsified: using non-public GSX user and attendance data files comprising 200 paid K-12 courses across 54,065 unique users between January and March 2020, Muddy Waters analyzed non-human automatic bot activity and concluded that "at least 73.2% of GSX's users are bots."

288. Following the publication of the May 18 Muddy Waters report, the price of GSX's ADSs fell by \$2.59, or 7.3% to close at \$32.84 per share on May 18, 2020, and fell further by \$3.30, or 9.74% to close at \$30.58 per share on May 20, 2020.

4. August 7, 2020

289. On August 7, 2020, Citi Research issued a market report downgrading GSX's ADSs from "Buy" to "Sell," adjusting the one-year target price to \$115 per ADS, citing concerns about GSX's valuation. This disclosure partially revealed that GSX's revenues and profits were overstated due to its falsification of student enrollments.

290. Following these disclosures, the price of GSX's ADSs fell by \$24.28, or 18.5%, to close at \$106.99 per share on Friday, August 7, 2020.

5. August 10, 2020

291. On Sunday, August 9, 2020, Sylvan Research published a report revealing further evidence that GSX was mostly a fake enterprise. The report compared the online presence of GSX employees with that of its competitors, and concluded that GSX had the lowest number of employees among the top seven online education companies in China, that the Company inflated

the number of teaching staff one hundredfold in its 1Q2020 6-K, and that based upon the online professional networking profiles of GSX's instructors and tutors, most lacked teaching credentials. The Sylvan Research report also revealed that GSX had only hired one online tutor in ninety days when the Company claimed to have hired 6,500.

292. Following this report, the price of GSX's ADSs fell by \$10.43 per share, or 9.75%, to close at \$96.56 per share on the next trading day, August 10, 2020.

6. September 2 and 3, 2020

293. On September 2, 2020, GSX announced that the SEC's Division of Enforcement had contacted the Company, requesting it to produce certain financial and operating records dating from January 1, 2017. Investors understood this investigation to concern the fraud Muddy Waters and other researchers had partly revealed.

294. On this news, the price of GSX's ADSs fell by \$11.41 per share, or 12.1%, to close at \$83.28 per share on September 2, 2020, and on September 3, the stock fell by \$4.53 per share, or 5.4%, to close at \$78.75 on September 3, 2020.

7. October 21, 2020

295. On October 21, 2020, Jon Quast of The Motley Fool reported that GSX management foresaw a loss of ¥900 million. While GSX does not issue guidance on net income, in Q2, it had earned revenues of ¥1,650 million in Q2 and net income of ¥18.6 million. It had guided to revenues of ¥1,936 million for Q3.²⁶ The report was accurate: GSX reported a Q3 2020 net loss of ¥932 million. Thus, the source of the report must have been someone at GSX with internal GSX information, and the report was a revelation of that internal information.

²⁶ Jon Quast, *Why GSX Techedu Stock Was Crushed on Wednesday*, The Motley Fool (Oct. 21, 2020, 12:43 PM), <https://www.fool.com/investing/2020/10/21/why-gsx-techedu-stock-was-crushed-on-wednesday/>.

296. The net loss was a materialization of the risk of Defendants' concealing that up to 70% of GSX's operations were fake. GSX reported Q3 2020 operating expenses of ¥2.5 billion. The lion's share of these expenses was ¥2.1 billion in selling expenses. As set out above, selling expenses were the fake expenses GSX used to hide the fact that its revenues were fake and therefore did not generate any cash.

297. On this news, the price of GSX's ADSs fell by \$29.39, or 28.55%, to close at \$71.23 per share on October 21, 2020.

VII. ADDITIONAL FACTS FURTHER PROBATIVE OF SCIENTER

A. The Individual Defendants' Job Responsibilities Required Them To Have Knowledge that Would Show Their Statements Were False and Misleading

298. As explained by several confidential witnesses, Defendants Shen and Chen both had job responsibilities that required them to have knowledge of areas of GSX's operations that would show that GSX's revenues, profits and student enrollments were mostly falsified.

1. CW-8

299. Confidential Witness 8 was employed with the title of Financial Manager at GSX at its Chengdu branch from October 2021 to October 2022. During part of CW-8's tenure, CW-8 reported directly to Defendants Shen, and for the remainder CW-8 reported to the Director of Finance, who reported directly to Defendant Shen. The finance team at GSX was comprised of approximately 50 individuals.

300. According to CW-8, Defendant Nan "knew what the company's marketing expenses were actually spent on." According to CW-8, prior to and during CW-8's employment, Defendant Shen was responsible for knowing how much the company was spending on marketing, and specifically was responsible for knowing and understanding the individual line items that made up the marketing budget. Moreover, according to CW-8, all marketing budgets

were sent to Shen, who could then review them to determine whether they were reasonable and normal.

301. Likewise, according to CW-8, prior to and during CW-8's employment, Shen was responsible for knowing "where the Company's revenue was coming from." Shen paid attention to revenue sources in monthly written reports concerning the Company's income and budget figures. Shen discussed marketing expenses and sources of revenue at meetings of the finance team.

302. Moreover, according to CW-8, Shen's responsibilities included keeping track of the number of the number of students enrolled, and Shen's responsibilities included knowing how the Company calculated the number of students enrolled.

303. CW-8 obtained access to the above information through online meetings with Shen, team-building activities with Shen, and general meetings with Shen at the Beijing headquarters.

2. CW-9

304. CW-9 likewise has confirmed that Chen and Shen were responsible for knowing what the Company's marketing dollars were actually being spent on. CW-9 was a Product & Development executive from the first half of 2015 through July 2019. CW-9 was initially responsible for GSX's entire backend platform and product. Later, CW-9 was responsible for GSX's enterprise SaaS system. CW-9 reported directly to Bin Luo, one of GSX's seven co-founders, who reported directly to Defendant Chen. CW-9 also physically sat close to Defendant Chen and spoke with Chen daily. During part of CW-9's tenure, CW-9 would often have weekend meals with Defendant Chen during which he would talk about his thoughts on GSX's business.

305. According to CW-9, Defendants Chen and Shen were “certainly responsible” for “knowing how much the company spent on marketing,” and Chen was “definitely responsible” for “knowing what the Company’s marketing expense were actually being spent on” “in 2019 and 2020.” When asked whether Chen and Shen were responsible for knowing the line items that made up the marketing budget, CW-9 responded “Yes, I think so.” CW-9 also confirmed that Chen and Shen were responsible for keeping track of the number of students enrolled in their programs, including in 2019 and 2020.

306. CW-9 and CW-9’s team developed a dashboard for senior executives, which they called the “boss dashboard”. It included flow of products, number and analysis of students, teacher evaluations, and class arrangements. According to CW-9, the boss dashboard was “very transparent”.

307. CW-9 learned these facts about the roles of Chen and Shen from his daily interactions and weekend meetings with Chen, and through his role in product and development that was one step removed from the C-Suite executives.

3. CW-10

308. Another CW-10, likewise has confirmed that Defendant Shen knew what the Company’s marketing expenses were actually spent on and was personally involved in the preparation of GSX’s marketing budget. CW-10 was the Financial Manager of GSX’s Zhengzhou branch from January 2020 through April 2022.

309. According to CW-10, marketing and advertising has always been an important analytical indicator at GSX. For this reason, and because of GSX’s high marketing and advertising expense, Shen would be personally involved in reviewing marketing and advertising expenses. According to CW-10, Shen was responsible for knowing what the Company’s

marketing expenses and what they were actually spent on. CW-10 also confirmed that Shen was personally involved in preparing the Company's marketing budget.

310. CW-10 confirmed that Shen job responsibilities included knowing what the Company's true sources of income were. Shen discussed the Company's sources of income at monthly financial meetings with CW-10's superiors, including the Financial Directors who reported to Shen. CW-10 confirmed that Shen followed the number of enrolled students. Shen regularly reviewed the finance department's financial management reports, which included business data and metrics including student attendance rates and renewal rates.

311. According to CW-10, GSX's Beijing headquarters set not only the overall budget numbers for the Zhengzhou branch but also individual line items.

312. According to CW-10, GSX created regular financial management reports for Shen and other senior executives. These reports included student attendance rates, renewal rates, the number of registered students, and the like.

4. CW-11

313. CW-11 likewise has confirmed that Defendant Chen knew the Company's sources of revenue, and personally monitored classes and attendees. CW-11 was the marketing manager of GSX's Wuhan office responsible for marketing and advertising. She worked at GSX's Wuhan branch from March 2015 through the beginning of 2020. CW-11 reported to the Wuhan office general manager who reported to Chen. CW-11 communicated directly with Chen by email and when he visited the Wuhan office.

314. According to CW-11, Chen knew the sources of revenue for GSX. CW-11 learned this from discussions Chen held with the marketing team about the Company's liquidity. Moreover, according to CW-11, Chen oversaw sales and marketing policies. General managers formulated specific sales plan based on Chen's direction.

315. According to CW-11, Chen and other senior managers made a habit of personally watching ongoing online courses. Not only did Chen review the course content, he would also check the number of attendees.

316. According to CW-11, Chen was particularly concerned about operational data. To allow Chen to monitor online classes, GSX created a specialized data system, including registration numbers, course purchase rates, and conversion rates. A specialized data team monitored the data system. All company data could be monitored through the system by the Individual Defendants.

317. Even beyond confidential witness accounts, Individual Defendant Shen independently has admitted that her job responsibilities require her to pay close attention to gross billings.²⁷ GSX defines gross billings as the total amount of cash received for selling course offerings in any given period net of the total refunds in such period. In a call to discuss GSX's Q2 2019 earnings, taking place on August 22, 2019, Defendant Shen stated that "gross billings . . . is the metric we pay close attention to" Likewise, on a call to discuss GSX's Q4 2019 earnings, Defendant Shen urged investors to compare gross billings to marketing expenses. On the Q1 2020 earnings calls, Defendant Shen reiterated that "sales and marketing expenses is related to our gross billings." Accordingly, as Defendant Shen paid close attention to gross billings and their relationship to the Company's sales and marketing expenses, she had additional

²⁷ Gross billings are important to GSX's operations because GSX's students pay for their courses in advance. GSX cannot recognize revenues when the students pay because it has yet to provide the services the students have paid for. Yet GSX reports the sum of these payments as gross billings. Gross billings is the leading indicator for revenues because gross billings will eventually be recognized as revenues as GSX performs the services for which the students have paid. As Defendant Chen stated on the Q1 2020 earnings call taking place on May 6, 2020, it typically takes three to six months for GSX to recognize gross billings as revenues.

reason to know that the cash GSX was receiving was mostly cash GSX had paid to brushers as marketing expenses for round-trip transactions.

B. Individual Defendants Had Personal Access to All Major Contracts, and So Had Access to Brushing Contracts

318. According to CW-8, Defendant Shen had personal access to all material contracts and their terms. It was GSX's practice to enter the amount of the contracts into GSX's financial system. Once they were entered into the system, Shen had access to the contracts. According to CW-8, all contracts involving large amounts of money would be sent to Shen personally. GSX's marketing contracts with third-party brushers certainly involved large amounts of money, because they accounted for the Company's massive marketing expenditures.

C. Statements by the Individual Defendants Directly Denying Brushing and Other Fraudulent Practices Are Strong Evidence of Recklessness or Knowledge

319. The Individual Defendants repeatedly and pointedly denied that the specific frauds alleged herein were occurring. These statements, often made in direct response to investor questioning, are strong evidence that the Individual Defendants, and GSX, at a minimum were severely reckless in not knowing the specific frauds alleged herein were occurring.

320. On June 15, 2015, an article was published on DuoZhi.com claiming that GSX required afterschool tutoring institutes using its platform to conduct brushing. The article went on to claim that GSX would promote the twelve institutes that spent the most on brushing²⁸. The article quoted the principal of a tutoring institute as saying that GSX required it to spend at least

²⁸ Cindy, *Gēn Shéi Xué Bèipù Liào Yāoqiú Rùzhù Jīgòu Shuā Dān, Mǒu Jīgòu Yuè Shuā Sìshíwàn* (跟谁学被爆料要求入驻机构刷单, 某机构月刷四十万), Duō Zhī Wǎng (多知网) (June 15, 2015, 3:20:22 PM), <http://www.duoZhi.com/company/201506153416.shtml>.

200,000 RMB on brushing every month and at least 100,000 RMB during a GSX event on June 16. The principal added that “the accounts for brushing are all fake. The platform (i.e. GSX) gave us over 10 accounts. Adding the accounts our own employees have registered, together we have over 20 accounts. We spent 20-50 thousand [RMB on brushing] for every class.”

321. Duozhi quoted a teacher as saying that “I asked in a 500-people teacher’s group if anyone had obtained any student order on GSX. Besides those payments via GSX made by students that we obtained from offline, none of those teachers had obtained any order. This is astonishing.”

322. Two days later on June 17, 2015, GSX published a statement claiming that “since GSX commenced its operations in 2014, it has been fighting both brushing and falsifying activities.”²⁹ GSX’s statement discussed its purported efforts on locating cheating teachers and account holders who intended to obtain unwarranted bonus from GSX.

323. During an interview with Chinese media on April 8, 2020, Defendant Chen directly denied researchers’ initial analyses showing that the Company was falsifying student enrollments and revenue when he called upon Muddy Waters to investigate the Company for fraud and expressed confidence that nothing would be found: “I think if Muddy Waters analyses our data seriously, there is a high probability that think Muddy Waters will not be so stupid. The level and IQ of the people in Muddy Waters is quite high.”

324. On April 9, 2020, during a conference call with investors, Defendant Chen denied the fraud directly and without qualification, including the Company’s falsification of student

²⁹ Jīng Bào Wǎng (京报网), *Gēn Shéi Xué: Fǎn Zuòbì Wǒmen Shì Rènzhēn De* (跟谁学：反作弊 我们是认真的), Wǎngyì Gōngsī (网易公司) (June 17, 2015, 11:14:26 AM), <https://news.163.com/15/0617/11/ASACHRL200014AED.html>.

enrollments and revenue, when he said, “[W]e decided not to respond to Grizzly’s short report. The report is full of irrelevant and false allegations and a lack of basic accounting knowledge.”

325. On April 10, 2020, in an interview titled “We didn’t pay the bill, Deloitte checked it! GSX CEO Responds to Short Selling,” Chen flatly denied that the Company was brushing and was quoted as stating, “There are people who put a label on it, saying that GSX is brushing. We’re a B2C business model, how can we brush?”³⁰

326. On April 14, 2020, Chen wrote the following to his 1.4 million followers on Sina Weibo, a social media platform similar to Twitter: “This is the first time in my life that I have encountered such absurdities and great errors in a row.” The same day, in a follow-up post, Chen excoriated Grizzly’s report in unqualified terms as “complete nonsense,” and said that he would ignore it. He stated further without qualification that, “[Grizzly’s report] fabricated the fact that 70% of GSX revenue was fabricated.”

327. On April 15, 2020, on his Sina Weibo mini blog, responding to equity research reports, Defendant Chen again claimed unequivocally that “GSX has never tolerated brushing.”³¹ He claimed that GSX “accentuat[es] high moral value very very much” and that it “is neither tolerant nor ambivalent when it comes to conduct or events that contravene the Company’s moral principles” since its formation in 2014.

³⁰ See Sina Finance, April 10, 2020, “We didn’t pay the bill, Deloitte checked it! GSX CEO Responds to Short Selling,” <https://webcache.googleusercontent.com/search?q=cache:Y7ZNk0ctTo8J:https://finance.sina>

³¹ Xīnlàng Cáijīng (新浪财经), *Gēn Shéi Xué Chuàngshī Rén Chénxiàngdōng Zàicì Huiyīng Xiāng Yuán Bàogào: Wánquán Yīpài Húyán* (跟谁学创始人陈向东再次回应香椹报告：完全一派胡言) (Apr. 15, 2020, 10:22 AM), <https://finance.sina.com.cn/chanjing/gsnews/2020-04-15/doc-iircuyvh7864998.shtml>.

328. On April 15, 2020, GSX issued a press release stating: “GSX Techedu Inc. . . . today firmly denied the false and ungrounded allegations raised in a report by Citron Research dated April 14, 2020.” The report by Citron Research dated April 14, 2020 claimed, among other things, that “GSX Techedu Inc. is overstating revenue by up to 70%.”

329. On the May 6, 2020 call to discuss GSX’s Q1 2020 earnings, Defendant Shen denied at length and in strident terms that GSX used brushing:

We also would like to take this opportunity to quickly talk about the disagreement we have with the recent short-seller report that we sell a recorded phone interview transcript. *Actually, in China, brushing is illegal.* It's hard to imagine that a criminal can take an extra call to take the risk and with no apparent benefits. *And the content of the interview was completely different from our actual operations.* For example, the recording says that the brushing has stopped because of the epidemic. But if you can tell that our growth in the first quarter and in the second quarter will still be very fast. And our ROI in 2019 was 3.2% in general. *We definitely couldn't figure out how brushing can improve ROI and make it more than one since we already divided big classes into several smaller classes that are hosted by tutors.* And to improve the learning experience like other companies are doing in the industry. This basically, you do not see other students, except for the small class. *So many things mentioned in the conversation make zero sense. We highly suspect the content of the phone interview recording is fake.* And if so, in the future, if the fake recording can be used as evidence, there will be no order in the capital market. *And we hope that they can provide any piece of evidence like name from our management that involve in brushing or any contract single nature bank receipt of which ID they use to brush.* Upon receiving this evidence, we will show our official stance official seal and the full set of bank statement approved. We've already provided all the banks we use. Please just pick one.

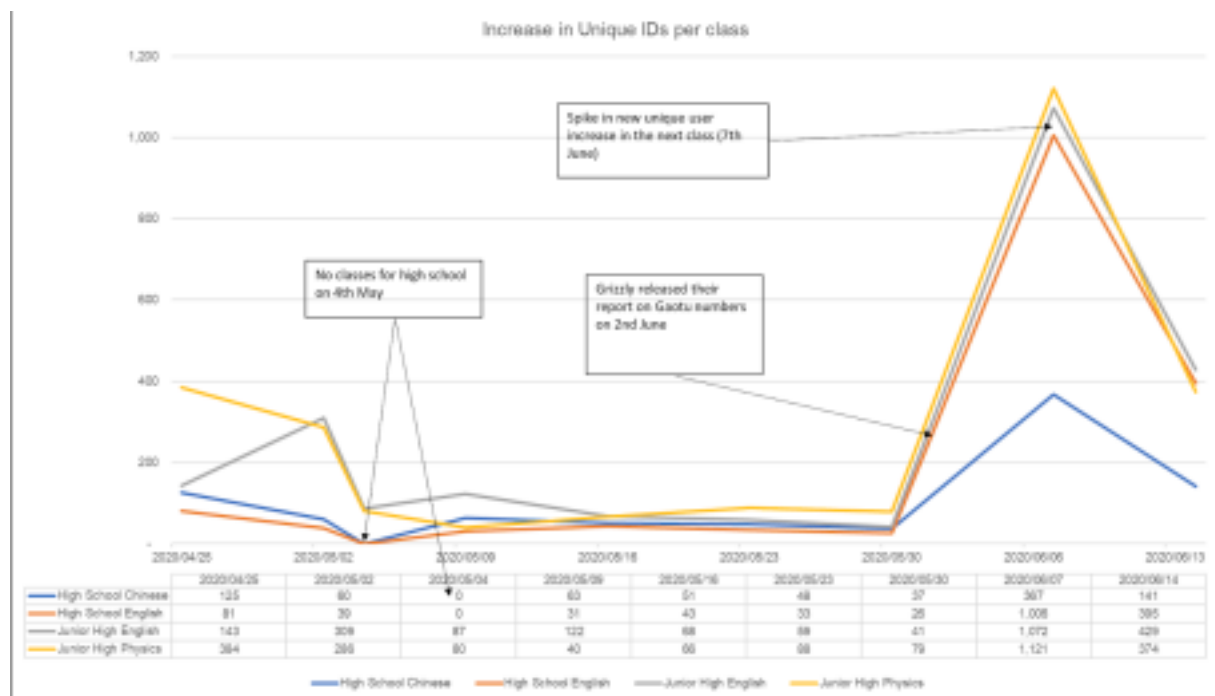
330. In May 2020, Chen posted to his 1.4 million followers on Sina Weibo: “Muddy Waters did some homework for the report. It’s just a pity that they didn’t understand the business model of our online live large class.”

331. On June 6, 2020, Defendant Chen stated that “unless something unexpected happens, this short farce should come to an end in the next two months.”

D. GSX Attempted to Cover Its Tracks

332. As set out above, GSX promptly deleted teacher profiles that were exposed as fake. GSX's affirmative steps to cover up falsification is probative of scienter.

333. GSX responded to several analyst reports through manipulation, which is likewise probative of scienter. On the same weekend as Grizzly's June 2 report alleging that GSX was overstating the number of customers it had, GSX's new signups for June 2020 class soared by 1,000%, even though previously the number of new customers had been tapering off:



334. Notably, this spike occurred even though the classes had already begun, so students were not obtaining the benefit of a full class. The June 7th class was the 8th class in the series, out of a total of 10 classes. Thus, according to GSX, on June 7, hundreds of students swarmed to waste their money buying a course that was already 70% over. In truth, the spike is the result of GSX's attempt to cover its tracks.

E. Individual Defendants’ Public Statements Show They Monitored Marketing Budget, Sales Channels and Classes

335. Individual Defendants admit that they monitored the Company’s budget. As Defendant Chen stated on a call to discuss GSX’s Q4 2019 earnings, “over the past three years, we prioritized effective growth, with future profitable growth. *We gauged each dollar of investment to make sure* — first to make the sense in terms of unit economics.”

336. Individual Defendants also admit that they monitored sales channels. On the Q2 2019 earnings call, Shen remarked that “we monitor all the [promotional] links and the barcode[s] we send out through all our sales channels.”

337. Defendants likewise admit that they were personally involved in monitoring classes. As Shen explained on the Q2 2019 earnings call, GSX was “probably the only company in the summer that we do over [sic] 100% supervision of all of our online live large classes.” Shen boasted that the supervision teams produced reports in 24 hours. Shen added that “sometimes, the report is also copied to our CEO.”

F. Student Enrollment was GSX’s Core Operation, and the Amount by which the Company Overstated Enrollment Could Not Have Escaped the CEO and CFO’s Attention

1. The Defendants’ Fraud Concerned GSX’s Key Operating Metrics

338. The core of GSX’s business is student enrollment in K-12 online classes. GSX falsified the Company’s student enrollments and revenue from such enrollments. Accordingly, the Defendants’ fraud concerned the core operations of GSX’s business, and the central metrics GSX used to measure its business. These operations and metrics were so important to GSX’s business that the Defendants knew, or were severely reckless in not knowing about them.

339. As GSX stated in its Form 20-F filed on April 3, 2020:

We have a quality assurance team that monitors the performance of our instructors for each course and generates analysis reports for the supervisor in the

relevant subject area. *Our CEO and senior management team has direct oversight over the analysis reports as well as the quality and performance of our instructors.*

340. Accordingly, Defendants were directly involved in analyzing teacher performance and therefore knew that at least 70% of students were falsified.

2. The Magnitude of the Defendants' Fraud Supports an Inference of Scienter

341. As detailed in this Amended Complaint, the Defendants' overstated class enrollments and revenue by at least 70% during the Class Period. The magnitude and duration of the fraud is strongly indicative of scienter. While GSX has directly implicated Defendants Chen and Shen in the fabricated transactions, it is implausible that other high-ranking executives did not know of or recklessly disregard the massive overstatement of GSX's key financial metrics during the Class Period.

G. Chen was Financially Motivated To Perpetrate Fraud on Investors

342. Defendant Chen was highly motivated to inflate the Company's ADS price and to maintain the illusion that GSX was experiencing exponential growth to personally enrich himself. Immediately before the IPO, Defendant Chen, as the sole owner of Ebetter International Group Limited ("Ebetter"), held 73,305,288, or 51.1%, of GSX's ordinary shares. Immediately after the IPO, all of these shares were redesignated as Class B shares, and Chen controlled 89.8% of the Company's voting power through Ebetter. Following the November 20, 2019 SPO, Chen, through Ebetter, retained his 73,305,288 Class B shares and held 89.9% of the Company's voting power.

343. Defendant Chen directly benefitted from the artificially inflated ADS price as a result of the \$50 million Margin Loan Facility dated March 30, 2020, in which Ebetter pledged all of its ownership interest in GSX in favor of Chen. As consideration for this Margin Loan

Facility, Ebetter mortgaged 6,000,000 of its Class B shares in favor of “Credit Suisse AG, Cayman Islands Branch of 11 Madison Avenue, New York, NY 10010, United States.”

344. Chen acted in concert with GSX and Defendant Shen to issue materially false and misleading information about the Company’s financial status to inflate the price of the ADSs so that Chen could secure the Margin Loan Facility, which is in effect a personal line of credit.

H. Corporate Insiders Exited their Positions to Finance the Company’s SPO

345. In the November 20, 2019 SPO, GSX did not offer any new shares to its Individual Shareholders. Instead, the SPO was the vehicle through which five of GSX’s ten largest shareholders sold their positions and walked away with a profit. GSX offered 20,700,000 ADSs in the SPO. Of those 20.7 million ADSs, (1) 2,349,999 represented all 1,566,666 shares held by Origin Beyond Limited, a party to the Shareholder Agreement, whose ultimate owners are certain undisclosed “GSX employees,” who took a profit of \$32,899,986; (2) 4,218,750 represented all 2,812,500 shares held by Banyan partners Fund II, L.P., a party to the Shareholder Agreement, which took a profit of \$59,062,500; (3) 2,531,250 represented all 1,687,500 shares held by QFcapital Limited, a party to the Shareholder Agreement, which took a profit of \$35,437,500; (4) 1,500,000 represented all 2,250,000 shares held by QF Group Limited, a party to the Shareholder Agreement, which took a profit of \$31,500,000; and (5) 412,980 represented all 619,470 shares held by Rolancy International Limited, a party to the Shareholder Agreement, whose ultimate owner is Mr. Bin Luo, who took a profit of \$8,672,580.

I. The Knowledge of GSX’s Senior Executives and Other Agents is Imputed to the Company

346. By virtue of their high-level positions as the two most senior officers of GSX, participation in and awareness of GSX’s quotidian operations, and control over the issuance of the materially false or misleading statements alleged above in Section V, the knowledge or

recklessness of Defendants Chen and Shen concerning the Defendants' false or misleading statements is imputed to the Company. Additionally, the knowledge or recklessness of other senior employees and managers at GSX concerning the Company's fabrication of revenue and expenses and undisclosed related-party transactions is also imputed to GSX. Accordingly, by no later than May 2019, prior to the start of the Class Period, GSX knew about or recklessly disregarded its fabrication of revenue and expenses and undisclosed related-party transactions.

VIII. ADDITIONAL INVESTIGATION ALLEGATIONS

347. Lead Counsel Pomerantz and its investigators spent hundreds of hours investigating this Action. For its investigation, Pomerantz retained three private investigative firms, one based in the United States, and the other two based in China, to identify, contact, and interview former employees, contractors, and students of GSX Techedu, Inc. The China-based investigative firms contacted numerous potential witnesses and conducted approximately 15 interviews. The first China-based firm directly contacted and interviewed CW-1, CW-3, CW-5, CW-6, and CW-7. The second China-based firm directly contacted and interviewed CW-8, CW-9, CW-10 and CW-11.

348. With respect to CW-2, Pomerantz and the U.S.-based and China-based firms reviewed the interview that is publicly posted at <https://www.youtube.com/watch?v=-7y3X1uhYAE&t=5s> (the "YouTube Link"). Individuals at the China-based firm who have native proficiency in Mandarin Chinese confirmed that the translations in the YouTube Link are accurate. Jing Chen, co-counsel in this Action, a native speaker of Mandarin Chinese, likewise reviewed the interview of CW-2 at the YouTube Link to verify the translation's accuracy.

349. The China-based firm also undertook an extensive online investigation of English-language and Chinese-language websites for relevant information and to verify the accuracy of the allegations in the Complaint. Pomerantz also retained the services of computer

science and artificial intelligence expert Craig Knoblock, Ph.D., who conducted an extensive, independent analysis described above.

IX. CLASS ACTION ALLEGATIONS

350. Plaintiffs bring this action as a class action pursuant to Federal Rule of Civil Procedure 23(a) and (b)(3) on behalf of a class consisting of all those who purchased or otherwise acquired GSX securities in the United States during the Class Period and who were damaged upon the revelation of the alleged corrective disclosures (the “Class”).

351. The members of the Class are so numerous that joinder of all members is impracticable. Throughout the Class Period, GSX securities were actively traded on the New York Stock Exchange. While the exact number of Class Members is unknown to Plaintiffs at this time and can be ascertained only through appropriate discovery, Plaintiffs believe that there are hundreds or thousands of members in the proposed Class. Record owners and other members of the Class may be identified from records maintained by GSX, its transfer agent, or its domestic depository, and may be notified of the pendency of this action by mail, using the form of notice similar to that customarily used in securities class actions.

352. Plaintiffs’ claims are typical of the claims of the members of the Class, as all members of the Class are similarly affected by Defendants’ wrongful conduct in violation of federal law that is complained of herein.

353. Plaintiffs will fairly and adequately protect the interests of the members of the Class and has retained counsel competent and experienced in class actions and securities litigation. Plaintiffs have no interests antagonistic to or in conflict with those of the Class.

354. Common questions of law and fact exist as to all members of the Class and predominate over any questions solely affecting individual members of the Class. Among the questions of law and fact common to the Class are:

(a) whether applicable securities laws were violated by Defendants' acts as alleged herein;

(b) whether statements made by Defendants to the investing public during the Class Period omitted and/or misrepresented material facts about the business, operations, and prospects of GSX;

(c) whether the Individual Defendants caused GSX to issue false and misleading statements during the Class Period;

(d) whether Defendants acted knowingly or recklessly in issuing false and misleading statements; and

(e) whether the members of the Class have sustained damages and, if so, what the proper measure of damages is.

355. A class action is superior to all other available methods for the fair and efficient adjudication of this controversy since joinder of all members is impracticable. Furthermore, as the damages suffered by individual members of the Class may be relatively small, the expense and burden of individual litigation make it impossible for members of the Class individually to redress the wrongs done to them. There will be no difficulty in the management of this action as a class action.

356. Plaintiffs will rely, in part, upon the presumption of reliance established by the fraud-on-the-market doctrine.

357. The markets for GSX's securities were open, well-developed, and efficient at all relevant times. As a result of the materially false and/or misleading statements and/or failures to disclose, GSX's securities traded at artificially inflated prices during the Class Period. On August 6, 2020 the Company's securities on the New York Stock Exchange closed at a Class

Period high of \$131.27. Plaintiffs and other members of the Class purchased or otherwise acquired the Company's securities relying upon the integrity of the market price of GSX's securities and market information relating to GSX and have been damaged thereby.

358. During the Class Period, the artificial inflation of GSX's securities was caused by the material misrepresentations and/or omissions particularized in this Amended Complaint, causing the damages sustained by Plaintiffs and other members of the Class. As described herein, during the Class Period, Defendants made or caused to be made a series of materially false and/or misleading statements about GSX's business, prospects, and operations. These material misstatements and/or omissions created an unrealistically positive assessment of GSX and its business, operations, and prospects, thus causing the price of the Company's securities to be artificially inflated and maintained at artificially inflated levels at all relevant times, and when disclosed, negatively affected the value of the Company's shares. Defendants' materially false and/or misleading statements during the Class Period induced and resulted in purchases, by Plaintiffs and members of the Class, of the Company's securities at such artificially inflated prices, and each of them has been damaged as a result.

359. At all relevant times, the markets for GSX's securities were efficient markets for the following reasons, among others:

- (a) GSX's securities met the requirements for listing, and were listed and actively traded, on the New York Stock Exchange, a highly efficient and automated market;
- (b) As a regulated issuer, GSX filed periodic public reports with the SEC and/or the New York Stock Exchange;
- (c) GSX regularly communicated with public investors *via* established market communication mechanisms, including through regular dissemination of press releases on the

national circuits of major newswire services and through other wide-ranging public disclosures, such as communications with the financial press and other similar reporting services; and/or

(d) GSX was followed by securities analysts employed by brokerage firms who wrote reports about the Company, and these reports were distributed to the sales forces and certain customers of their respective brokerage firms. Each of these reports was publicly available and entered the public marketplace.

360. As a result of the foregoing, the market for GSX's securities promptly digested current information regarding GSX from all publicly available sources and reflected such information in the price of GSX's securities. Under these circumstances, all purchasers of GSX's securities during the Class Period suffered similar injury through their purchase of GSX's securities at artificially inflated prices, and a presumption of reliance applies.

361. A Class-wide presumption of reliance is also appropriate in this action under the Supreme Court's holding in *Affiliated Ute Citizens of Utah v. United States*, 406 U.S. 128 (1972) and the Third Circuit's reiteration thereof in *Johnston v. HBO Film Mgmt., Inc.*, 265 F.3d 178 (3d Cir. 2001), because the Class's claims center, in large part, upon Defendants' material omissions. Because this action involves Defendants' failure to disclose material adverse information regarding the Company's business operations and financial prospects—information that Defendants were obligated by law to disclose—positive proof of reliance is not a prerequisite to recovery.

X. NO SAFE HARBOR

362. The statutory safe harbor provided for forward-looking statements under certain circumstances does not apply to any of the false statements pleaded in this Amended Complaint. The statements alleged to be false and misleading herein all relate to then-existing facts and conditions. Additionally, to the extent certain of the statements alleged to be false may be

characterized as forward looking, they were not identified specifically as “forward-looking statements” when made, and there were no meaningful cautionary statements identifying important factors that could cause actual results to differ materially from those in the purportedly forward-looking statements.

363. In the alternative, to the extent that the statutory safe harbor is determined to apply to any forward-looking statements pleaded herein, Defendants are liable for those forward-looking statements because at the time each such statement was made, the speaker had actual knowledge, or recklessly disregarded the risk, that the forward-looking statement was materially false or misleading, and/or the forward-looking statement was authorized or approved by an executive officer of GSX who knew, or recklessly disregarded the risk, that the statement was false when made.

XI. COUNT ONE

For Violations of Section 10(b) of the Securities Exchange Act of 1934 and SEC Rule 10b-5 (Against Defendants–GSX, Chen and Shen)

364. Plaintiffs repeat, reallege, and incorporate by reference each and every allegation heretofore pleaded as if fully set forth herein.

365. Throughout the Class Period, GSX’s securities were listed on the New York Stock Exchange.

366. During the Class Period, the Defendants made, disseminated, or approved the false and misleading statements specified above. The Defendants knew that such statements, when made, were false and misleading, or were reckless in their disregard as to the truth of such statements, which contained material misrepresentations and failed to disclose material facts necessary in order to make the statements made, in light of the circumstances under which they were made, not misleading.

367. The Defendants violated Section 10(b) of the Exchange Act of 1934, *codified as amended*, 15 U.S.C. § 78j(b) and SEC Rule 10b–5, *codified as amended*, 17 C.F.R. § 240.10b–5, because, in utilizing the means or instrumentalities of interstate and foreign commerce, including but not limited to the mails and the Internet, and/or the facilities of the New York Stock Exchange, they directly or indirectly:

- (a) employed devices, schemes or artifices to defraud;
- (b) made untrue statements of material fact or omitted to state material facts necessary in order to make the statements made, in light of the circumstances under which they were made, not misleading; and/or
- (c) engaged in acts, practices, practices, and a course of business that operated as a fraud or deceit upon Plaintiffs and the members of the Class in connection with their purchases of GSX securities during the Class Period.

368. Plaintiffs and members of the Class have suffered damages in that, in reliance on the Defendants' statements and the integrity of the market, they paid artificially inflated prices for GSX's securities. Plaintiffs and members of the Class would not have purchased such securities at the prices they paid, or at all, if they had been aware that the market prices of GSX's securities had been artificially and falsely inflated by the Defendants' false and misleading statements.

369. As a direct and proximate result of the Defendants' wrongful conduct, Plaintiffs and members of the Class suffered damages in connection with their purchases of GSX's securities on the New York Stock Exchange during the Class Period.

XII. COUNT TWO

For Violations of Section 20(a) of the Securities Exchange Act of 1934 (Brought by Plaintiffs against the Individual Defendants—Chen and Shen)

370. Plaintiffs repeat, reallege, and incorporate by reference each and every allegation heretofore pleaded as if fully set forth herein.

371. Throughout the Class Period, GSX's securities were listed on the New York Stock Exchange.

372. As alleged herein, the Individual Defendants acted as controlling persons of GSX within the meaning of Section 20(a) of the Exchange Act of 1934, *codified as amended*, 15 U.S.C. § 78t(a). By virtue of their high-level positions, ownership rights, contractual rights, participation in and/or awareness of the Company's operations, and/or intimate knowledge of the false financial statements filed by the Company with the SEC and disseminated to the investing public, the Individual Defendants had the power to influence and control, and did influence and control, directly or indirectly, the decision-making of the Company, including the content and dissemination of the various statements which Plaintiffs contends are false and misleading. The Individual Defendants were provided with or had unlimited access to copies of the Company's reports, press releases, public filings, and other statements alleged by Plaintiffs to be misleading prior to and/or shortly after these statements were issued and had the ability to prevent the issuance of the statements or cause the statements to be corrected.

373. In particular, each of these Individual Defendants had direct and supervisory involvement in the quotidian operations of the Company and, therefore, is presumed to have had the power to control or influence the particular transactions giving rise to the securities violations as alleged herein, and exercised the same.

374. As set forth above, the Defendants each violated Section 10(b) of the Exchange Act of 1934 and SEC Rule 10b-5 by their acts and/or omissions as alleged in this Amended Complaint. By virtue of their positions as controlling persons, the Individual Defendants are liable pursuant to Section 20(a) of said Act. As a direct and proximate result of the Individual Defendants' wrongful conduct, Plaintiffs and other members of the Class suffered damages in connection with their purchases of the Company's securities traded on the New York Stock Exchange during the Class Period.

XIII. PRAYER FOR RELIEF

WHEREFORE, Plaintiffs pray for relief and judgment, as follows:

- A. Determining that this action may be maintained as a class action under Rule 23 of the Federal Rules of Civil Procedure;
- B. Awarding compensatory damages in favor of Plaintiffs and the other members of the Class against all Defendants, jointly and severally, for all damages sustained as a result of Defendants' wrongdoing, in an amount to be proven at trial, including interest thereon;
- C. Awarding Plaintiffs and the Class their reasonable costs and expenses incurred in investigating, bringing, and maintaining this action, including counsel fees and expert fees; and
- D. Awarding such other and further legal or equitable relief as the Court deems just and proper.

XIV. JURY TRIAL DEMANDED

Plaintiffs hereby demand a trial by jury on all issues so triable in this Action.

Dated: April 25, 2023

Respectfully submitted,

POMERANTZ LLP

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